romstal VISION

PELLET BOILER SM ECO 25 and 33 COMPACT FOR CENTRAL HEATING

Instructions for use, maintenance and installation

TERMAL INT energy systems

→ Pellet fuel from timber biomass biofuels →

INSTRUCTIONS FOR CONNECTING, OPERATION, AND MAINTENANCE OF THE STOVE

Heating devices (in this manual they are called "stoves") by TERMAL INT LTD (in this manual titled producer) are assembled and tested in accordance with the safety and applicable measures, and regulations of the European Community.

This manual is intended for users of the boilers, contractors who install the boilers, operators and workers for boiler maintenance that is shown on the front page of the manual.

If you do not understand something in this manual, please contact our professional services or an authorized Termal int service center. In doing so, always specify the number of the chapter where there is some ambiguity.

WARNING:

IMPORTANT: Connecting the appliance to the electrical installation must be carried out by qualified and authorized persons in accordance with applicable regulations.

This appliance is not intended for use by persons (including children) with reduced physical, motor, and mental capabilities, or to persons with a limited knowledge and experience in the absence of the person responsible for their safety or care.

Boiler is not a toy; Children without supervision cannot be allowed near this appliance.

DOUBLE COMBUSTION SYSTEM

The flame obtained by proper combustion of the pellet in the stove emits the same amount of carbon dioxide (CO_2), which would be freed as a result of the natural decay of wood.

The amount of carbon dioxide (CO_2) obtained through combustion or decomposition of plant mass corresponds to the amount of carbon dioxide (CO_2) which the plant mass is able to obtain from the environment and to transform it into air and carbon of the plants during its entire lifetime.

The use of non-renewable fossil fuels (coal, oil, gas), contrary to what happens with the wood, releases into the atmosphere huge amounts of carbon dioxide (CO_2), that have been gathering up for millions of years, creating a greenhouse effect. The use of wood as fuel is therefore perfectly balanced with the environment, because the wood as a renewable fuel is in ecological harmony with nature.

Using the principle of clean combustion, we fully achieve these objectives, and so producer has directed its development and all activities towards fulfilling this goal.

What do we consider clean combustion and how does it work?

Controlling and adjusting the primary air and injecting the secondary air causes secondary combustion, or the so-called post-combustion, which provides a secondary flame that is by its nature lighter and stronger than the primary flame. The addition of new oxygen (inserted through the air) allows further combustion of gases that are not completely burned. This significantly increases the thermal efficiency and reduces harmful emissions of carbon monoxide (CO), because the incomplete combustion is minimized. These are the basic characteristics of these stoves and other products of this produce.

SADRŽAJ

1.TECHNICAL CHARACTERISTICS OF BOILER

COMPACT 25:

NAME	VALUE	UNIT
Dimension	640 x 925 x 1475	mm
Mass	270	kg
Thank capacity	75	kg
The door of the tank	530 x 320	mm
Water capacity of the boiler	60	l
Cleaning door	285 x 245	mm

NAME	VALUE	UNIT
Installation place	4.18	m^2
The height from the floor to axis of the flue terminal	210	mm
The height from the floor to axis of the hot water terminal	1125	mm
The height from the floor to axis of the cold water terminal	560	mm
The height from the floor to axis of the (filling/emptying) terminal	565	mm
Flue terminal diameter	80	mm
Diameter of exterior air intake on the wall	60	mm
Diameter of the hot water terminal	1”	col
Diameter of the cold water terminal	1”	col
Diameter of the (filling/emptying) terminal	1/2	col
Voltage and frequency	220 /5/50	V/A/Hz

NAME	VALUE	UNIT
The power of the water heater at (min/max) power	7.0 – 25.0	kW
Heating volume	170 – 200	m^2
Water pressure	1.5 – 2.5	bar
Water temperature	65 – 80	˚C
Flue temperature	~160	˚C
Optimal draft	0.05 – 0.1	mbar
The main/max consumption	2.1 – 5.2	kg/h
Volume of expansion vessel	12	l
Pump power (max)	93	W

COMPACT 33:

NAME	VALUE	UNIT
Dimension	720 x 950 x 1475	mm
Mass	285	kg
Thank capacity	90	kg
The door of the tank	610 x 320	mm
Water capacity of the boiler	70	l
Cleaning door	260 x 200	mm

NAME	VALUE	UNIT
Installation place	4.22	m^2
The height from the floor to axis of the flue terminal	210	mm
The height from the floor to axis of the hot water terminal	1145	mm
The height from the floor to axis of the cold water terminal	565	mm
The height from the floor to axis of the (filling/emptying) terminal	565	mm
Flue terminal diameter	80	mm
Diameter of exterior air intake on the wall	60	mm
Diameter of the hot water terminal	1”	col
Diameter of the cold water terminal	1”	col
Diameter of the (filling/emptying) terminal	1/2	col
Voltage and frequency	220 /5/50	V/A/Hz

NAME	VALUE	UNIT
The power of the water heater at (min/max) power	9.0 – 30.0	kW
Heating volume	220	m^2
Water pressure	1.5 – 2.5	bar
Water temperature	65 – 80	˚C
Flue temperature	~160	˚C
Optimal draft	0.05 – 0.1	mbar
The main/max consumption	2.1 – 6.2	kg/h
Volume of expansion vessel	---	---
Pump power (max)	93	W

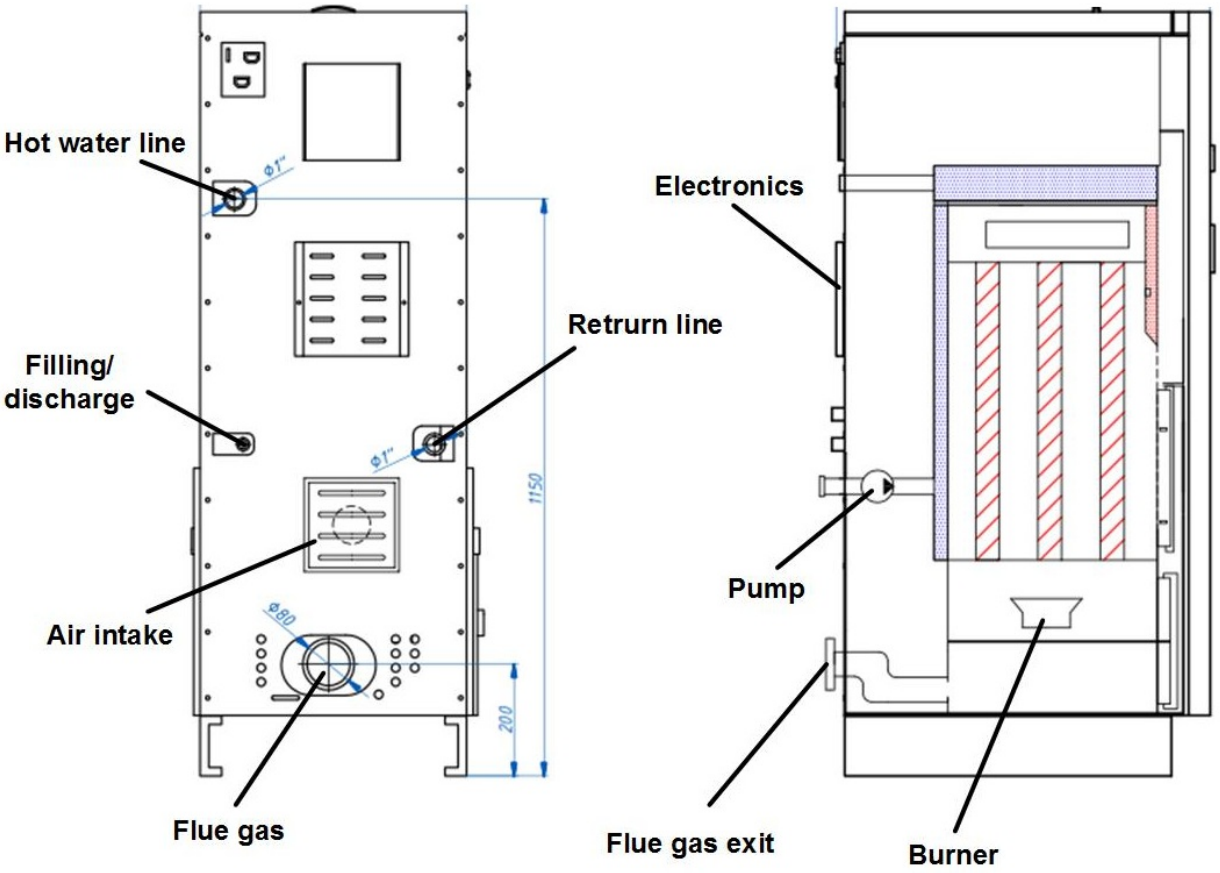


Figure 1. Boiler SM ECO 33 compact

2. THE PURPOSE OF THIS MANUAL

The purpose of the instructions is to enable the user to take all the necessary measures in order to ensure safe and proper use of the stove.

2.1 UPDATES

This manual reflects a work of art at the moment when the boiler was placed on the market. Therefore, producer does not take into account the boilers that are already on the market with the appropriate technical documentation and considers them as defective or inadequate after any kind of modification, adaptation or application of new technologies to newly produced machines.

The contents of this manual should be carefully read and studied. It is necessary to strictly follow all the instructions given in this manual. All information contained in this manual is necessary for proper connection, use, and maintenance of your stove.

Therefore, this manual has to be carefully stored for the necessary instructions in the event of any problems or concerns.

If the stove is given or sold to another person, the new owner must also be given this instructions manual.

If you have lost your manual, you can request a new copy from the manufacturer, authorised distributor or service person.

3. RESPONSOBILITIES OF THE MANUFACTURER

In issuing these instructions, producer **accepts no civil or legal liability, direct or indirect, due to:**

- **Accidents caused by not respecting the standards and specifications given in this manual,**
- **Accidents caused by improper handling or use of the stove by the user,**
- **Accidents resulting from modifications and repairs, which were not approved by producer,**
- **Poor maintenance,**
- **Unforeseen events,**
- **Accidents resulting from the use of spare parts that were not original or not intended for these models of stoves.**

Responsibility for connecting is fully assumed by the installer - contractor.

3.1 GENERAL TERMS OF USE

The user of the appliance must have the following basic characteristics:

- be an adult and responsible person,
- have a specific technical knowledge that is needed for routine maintenance of electrical and mechanical components of the stove.

CHILDREN ARE NOT allowed near the boiler without adult supervision.**BOILER is not a toy.**

3.2 TRANSPORTING AND MOVING THE BOILER - HANDLING

When moving the boiler, it is necessary to be careful and not allow the boiler to tilt forward. This is because the brunt of the stove is forward.
During transportation of the stove, which has to be completely safe, make sure that the forklift has the load that is greater than the weight of the stove that it is supposed to lift. Avoid twitching and jerking movements.
ALL PACKAGING MATERIAL SHOULD BE REMOVED SO THAT IT IS OUT OF REACH OF CHILDREN, BECAUSE THE MATERIALS THAT ARE INSIDE CAN LEAD TO CHILDREN SUFFOCATING. THESE INCLUDE PLASTIC BAGS, FILM, POLYSTYRENE, ETC.

3.3 RESPONSOBILITIES OF THE INSTALLER

Installer's responsibility is to do all the tests of the flue pipeline, air supply, and all the things that are necessary for connecting (installing) your stove.
Installer's responsibility is to harmonize the boiler installation to local regulations which apply where the boiler is connected (installed).

The use of the stove must be in accordance with the instructions for use and maintenance, as well as with all the security standards that are given by the local regulations that apply where the boiler is connected (installed).

The installer has to **check:**

- the type of boiler to be connected,
- whether the room corresponds to the boiler where the boiler will be installed, which is expressed as the minimum size required for installation, set forth by the manufacturer of the boiler,
- heat generator
- manufacturer's instructions regarding the requirements of smoke removal systems (ducts and pipes for smoke exhaust),
- inner cross section of the chimney, the material out of which the chimney is made, uniform cross section,
- that there are no disturbances and obstacles in the chimney,
- height and vertical extension of the chimney,
- altitude at the place of connecting the boiler,
- the existence and suitability of the protective cover for the chimney that is resistant to the wind,
- the possibility of securing the external air supply and the size of the necessary openings,
- simultaneous use of boiler that needs to be connected with other equipment that already exists at that place.

If the results of all checks are positive, then we can proceed with connecting the stove. Make sure you follow the instructions of the manufacturer of the stove, as well as the standards for fire protection and the safety standards provided.

When you are finished connecting, the boiler has to be turned on in trial mode for at least 30 minutes to test if the boiler is working properly.

When the installation and important details are completed, the installer must provide the client the following:

- Instructions for use and maintenance issued by the manufacturer of the boiler (if such instructions are not provided with the stove),
- The documentation necessary to comply with the existing standards.

4.INSTALATION – BOILER INSTALLATION

Responsibility for the work carried out at the place of connection is entirely on the user.

Before one turns the boiler on, the installer must meet all legal standards of safety, as well as the following requirements:

- to check that setting up that boiler complies with local, national, and European regulations,
- that the location of setting up the boiler meets the requirements set forth in this manual,
- to set up the flue pipes,
- that air intake matches the type of the installed boiler,
- that the electrical connections are not set up using temporary and/or not insulated electrical cables,
- to evaluate the effectiveness of grounding electrical systems,
- to always use personal protective equipment and all means of protection that are prescribed by local regulations,
- to always provide sufficient service space required for any maintenance and repair of boiler

4.1 INSTALLING THE BOILER

We recommend you to unpack the boiler only when the boiler is set up in the position where it will be connected.

If the surrounding walls and/or floors are made of materials that are **not resistant to heat,** then one should use adequate protection using the insulating material that does not burn.

Always make sure that you leave a safe distance (about cc 35/45 cm) between the boiler and furniture, home appliances, etc. To protect the floor if it is made of combustible materials, we suggest you put a metal plate under the stove on the floor with the thickness of 3-4 mm that will stretch at least 30 cm in front of the boiler.

The boiler must be at least 25 cm away from the surrounding walls. Always leave at least 15 cm between the rear side of the stove and the wall to allow for proper air circulation, or for the air to flow properly in that area.

If the stove is installed in a boiler house with a existing devices for sucking out air or if it is placed in the room with appliances that use solid fuel (such as a wood burning stove), always make sure that the amount of inlet air in the room is sufficient to ensure safe operation of the boiler.

If a smoke channel goes through the ceiling, it should be properly thermally insulated using the protection out of insulating materials that does not burn. When the boiler is set up into place, it should be levelled.

DANGER!

The exhaust gas Armour **must not be connected to**:

- the smoke pipe used by another heat generator (boilers, furnaces, fireplaces, stoves, etc.),
- the air drawing system (grilles, ventilation openings, etc), even if the system is inserted into the drain pipe.

DANGER!

Postavljanje ventila na cijevi za protok (draft) zraka (ventili sprečavaju protok zraka i onemogućavaju draft) je zabranjeno.

ATTENTION!

If the ejection path of smoke creates such a bad draft, of a bad flow of air (many curves, improper completion of the ejection of smoke, constriction, etc.) discharge of smoke can be bad, or in a situation like this smoke discharging is not as good as it could be.

The smoke ejection system from the boiler operates under negative pressure in the stove chamber and with mild pressure from the smoke drain pipe. It is very important that the smoke extraction system is hermetically closed (sealed). This requires the use of a smooth tube on the inside. First of all you must carefully study the plan and structure of the room when the smoke extraction pipe is set up through the walls and roof, so that the installation of pipes is performed properly in accordance with the standards of fire protection.

You should first ensure that the room where the boiler is located has enough air for combustion. It is advisable to periodically perform check so as to ensure that the combustion air comes right up to the combustion chamber. The stove operates at 220 V ~ 50 Hz. Make sure that the electrical cord is not underneath the boiler, to be away from the boiler, to be away from hot spots, and not to touch any sharp edges that it could penetrate. If the boiler is electrically overloaded, this can lead to shortening of the lifetime of the electronics of the boiler.

Never turn off the power supply by pulling the plug when there is a burning flame in the boiler. This could jeopardize the proper functioning of the boiler.

4.2 THE SMOKE EXHAUST SYSTEM

The smoke exhaust must be carried out in accordance with existing standards. Exhaust gas tube should be well sealed (see Figures 2-9).

For smoke exhaustion, one can also use classic brick chimneys while flues can also be made of pipes that need to be well insulated (double wall) and sealed, to avoid creating condensation in them.

The drain tube absolutely must not be connected to other systems of any kind, such as the systems where the smoke is removed from the combustion chamber, exhaust grilles or air distribution system, etc. Also, the smoke exhaust must not be set up in enclosed or semi-enclosed areas such as garages, narrow corridors, underground passages, or at any other similar places. When the boiler is connected to the exhaust gas pipeline, it is necessary to bring professional chimney sweep to verify that the chimney does not even have the tiniest cracks or fissures. If in the exhaust gas chimney there are such cracks, the pipe for smoke exhaustion must be wrapped in insulation for proper functioning.

For this purpose, the tubes that can be used are solid and made of painted steel (minimum thickness 1.5 mm) or from stainless steel (minimum thickness 0.5 mm).

The smoke extraction system (chimney) built out of metal pipes must have grounding in accordance with existing standards and regulations. **Grounding is required by law.**

The grounding connection must be separated from the grounding for the boiler.

The smoke exhaustion pipe must be done according to the standards in terms of dimensions

and materials used for its construction (Table 1).

A) The top of the chimney is resistant to wind

B) Chimney dimensions are not limited; important is that chimney does not have more then 15 Pa draft

C) Gasket /Sealed

D) Inspection hole - for control

Flue pipes that are in poor shape, or are made out of inappropriate materials (asbestos cement, galvanized sheet, etc. with rough or porous surfaces) are inadequate and jeopardize the proper functioning of the boiler.

The smoke can be drained through a classic smoke pipe (see next Figure), provided that it meets the following requirements:

- Check the maintenance of the drain flue pipes or chimneys. If the smoke drain pipe is old it should be replaced with a new one. If the chimney is damaged it is good to repair it or rebuild it by inserting a steel pipe that is properly insulated with mineral wool.

- The smoke can be discharged directly into the smoke pipe (chimney) only if it has a minimum draft of 5 Pa, and not bigger then allowed limit (15 Pa), and if there is a cover for checking and cleaning.

- **If the chimney draft is less then minimal needed (5 Pa)**, **or if draft is bigger then maximum allowed (15 Pa),** possible increased regulation of draft (its decrease) in the chimney can be regulated ba following ways:

1. If in the bottom of the chimney there is an opening for cleaning, on opening can be installed draft regulator.

2. Insert a steel pipe in the chimney with a diameter of 12cm or more, if there is a possibility for such reparation of the chimney.

3. Inspection of chimney by adequate chimney service and proposal solutions to problems from their part

4. By adjusting certain parameters in the stove. This adjustment must be done only by an authorized service of Termal int.

- Make sure that the connection to home chimney is properly sealed.

- Avoid contact with material that burns easily (such as wooden beams), and in all cases they should be isolated with anti-fire material.

A) Mineral wool

B) Steel pipes

C) A peripheral wall

The stove is designed to be connected to the chimney flue pipes with a diameter of 80mm. If you are not using a standard chimney, but you have a new chimney, or you are modifying the existing one, use insulated stainless pipes (double wall) with a diameter given in Table 1. Flexible pipes are not permitted.

SYSTEM TYPE	DIAMETER mm	SYSTEM MARK
Pipe length less than 5 m	80	acceptable
Pipe length more than 5 m	120	required
To be installed in places above 1,200 meters above sea level	120	recommended

Table 1

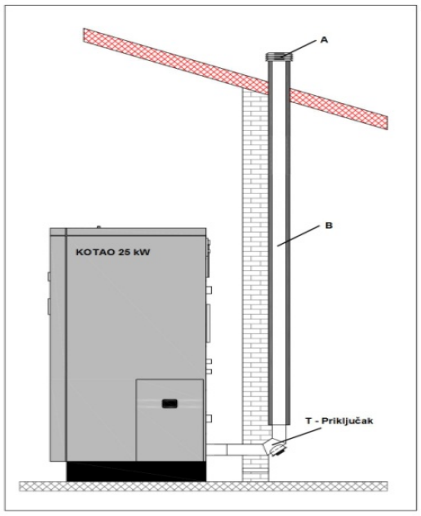


Figure 2.

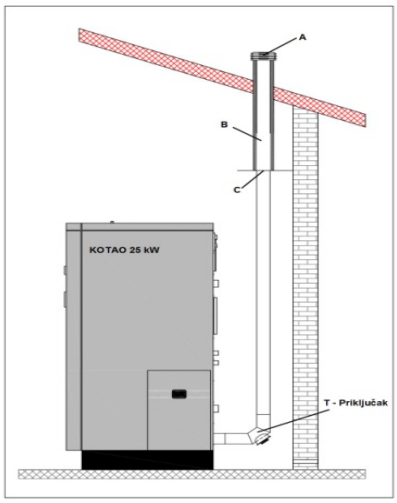


Figure 3.

When using the connecting pipe between the boiler and the flue drain hole, be sure to use a connector (as shown in Figure 4a), with the clean-out cover (cap) next to the boiler. Applying this connector must enable the collection of ash, which is produced inside the tube, and the smoke drain pipe must occasionally be cleaned without having to remove the tube. The smoke is under mild pressure and therefore it is required to check the cover (cap) for cleaning the exhaust gas system that is perfectly sealed and it remains so after each cleaning. Make sure to perform the same sequence for assembly and check the condition of the seals.

Install the flue pipes pursuant to Figure 9.

It is strictly recommended to avoid the use of horizontal extensions, and if necessary, make sure that the pipe is not bent but that it has the slope of at least 5%. The horizontal part of the drain flue pipes must not in any case exceed the length of 3 m.

It is not recommended to connect the smoke exhaust directly to the boiler with a horizontal part longer than 1 m. See Figures 4 - 9. After the connector (figure 4a) it is necessary to set up a vertical extension of Ø 80mm in length for at least 1-1.5 m, and only after that to move to the horizontal extension of Ø 80mm and a vertical extension of Ø 80 or Ø 120mm, depending on the height of the flue pipe (chimney) as shown in Table 1.

When connecting the boiler to the chimney using fittings, one must install a knee with a hole for cleaning (Figure 4a). Using the knee with an opening for cleaning allows for regular cleaning, without the need to dismantle the pipes. Drain gases in the chimney connector are under mild pressure so it is necessary to check that the cover for cleaning the ashes is completely sealed and to seal it after each cleaning. Please make sure everything is properly returned to its place, and check the condition of the seals.

Figure 4a. Cleaning elements

Ideal vacuum primarily depends on the absence of barriers such as narrowing and/or corner connectors. It is recommended that the knees are 30°, 45 °, and 90 °. Knee at 90 ° shall be three-fold (**Figure 4b**).

In any case, it is necessary to ensure that the initial part of the vertical flue pipe has the length of at least 1.5 m. Only in this way can you achieve the proper removal of flue gases.

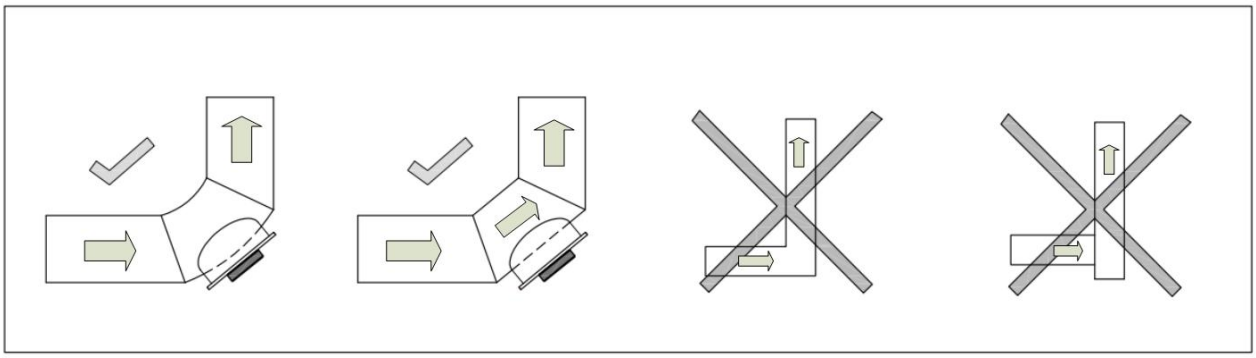


Figure 4b.

In Figure 5, left, we show how a complete (top) is supposed to look like when you have two chimneys next to each other, and in Figure 5, right, how not to do the end part.

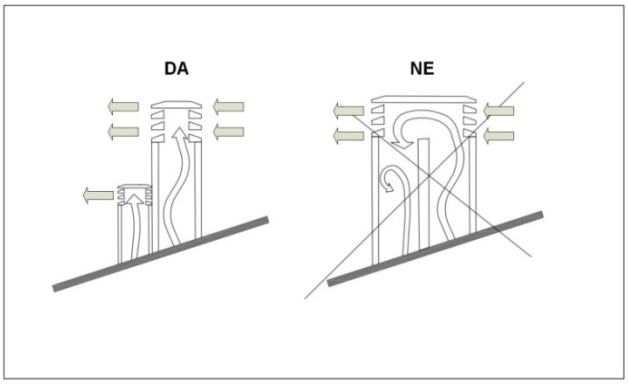


Figure 5.

4.3 3 INSULATION AND THE DIAMETER OF THE OPENING (HOLE) ON THE ROOF (OR IN THE WALL)

Once you determine the position of the boiler, it is necessary to make a hole through which a smoke pipe must pass. This varies depending on the type of installation, diameter of the exhaust gas pipe (see Table 1) and the type of wall or roof for the tube to pass. See Table 2. Insulation needs to be made out of mineral wool with a nominal density greater than 80 kg/m^2.

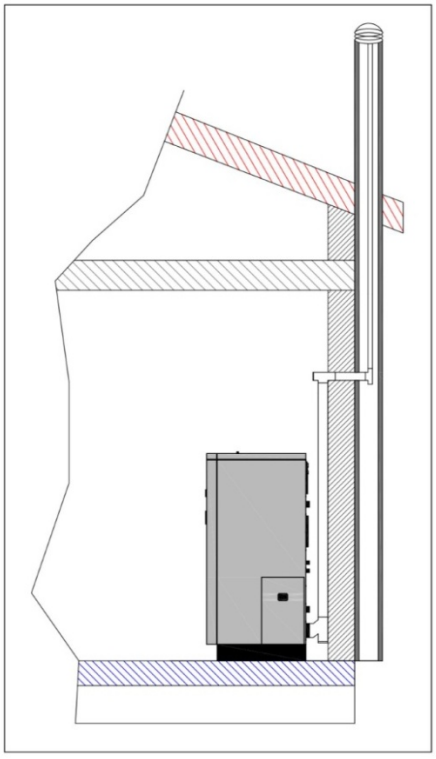
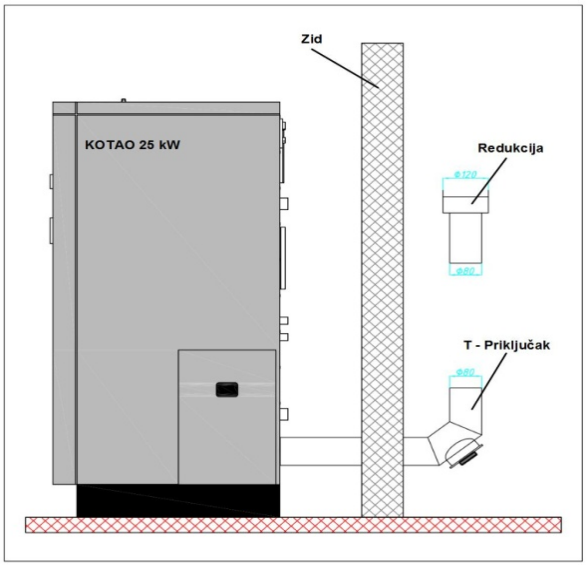


Figure 6.



Slika 7.

1. Armature 80> 120

2. A pipe fitting with curve

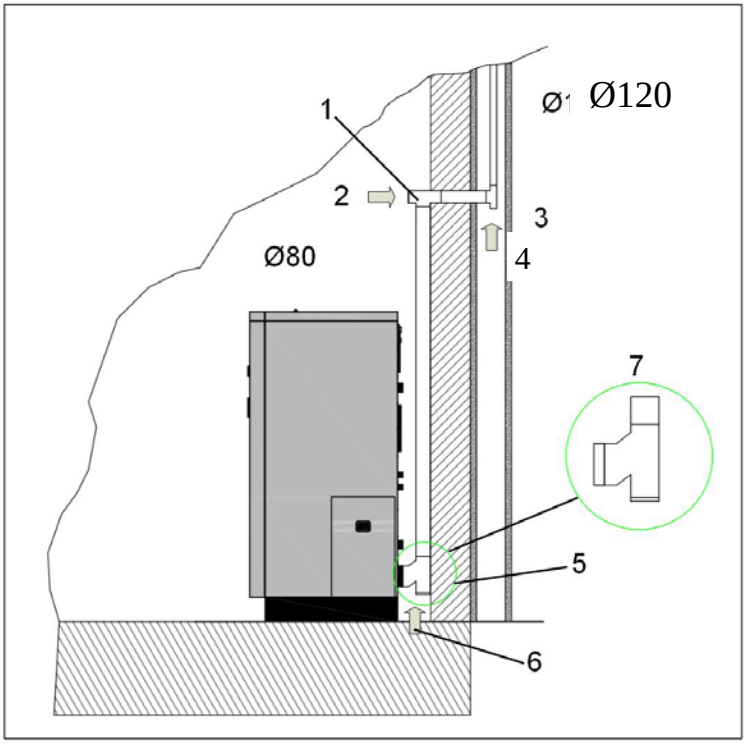
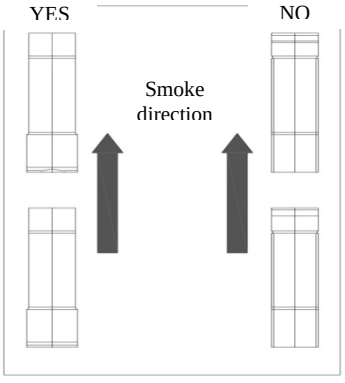


Figure 8.

1. A pipe fitting with curve
2. Cleaning direction
3. Opening, a window for servicing / inspection
4. Cleaning direction
5. A pipe fitting with curve – T- pipe connection
6. Cleaning direction
7. A pressure lid for cleaning (plug-in)



Slika 9. Mounting the flue pipe

Insulation thickness mm		Diameter of the smoke exhaust pipe (mm)	
		D.80	D.120
		Diameters of the opening (holes) to be made (mm)	
The walls are made of wood, or in any case, flammable, or parts that are flammable.	100	150	190
Concrete wall or a roof	50	100	140
A wall or a brick roof	30	100	140

Table 2: Insulation thickness for the part of the system that passes through the wall or roof

Above all it is necessary to provide the PERFECT AIRFLOW (draft) in pipes for smoke exhaustion that has to be free, without any obstacles, such as different narrowing or corners. All displacements of the axis must have a tilted orbit with a maximum angle of 45 degrees from the vertical, while 30 degrees is the best solution. This displacement would be best done near the top of the chimney resistant to the wind.

According **to the regulations (the top of the chimney resistant to wind, distance, and placement of the stove**) the distances shown in Table 3 must be met:

Roof slope:	The distance between the ridge and the chimney cap	Minimum height of the chimney measured at the top slot (at the back of the chimney)
α	Distance in meters	Height in meters
15^0	less than 1.85 m greater than 1.85 m	0,50 m above the ridge 1,00 m from the slope of the roof
30^0	less than 1.50 m greater than 1.50 m	0,50 m above the ridge 1,30 m from the slope of the roof
45^0	less than 1.30 m greater than 1.30 m	0,50 m above the ridge 2,00 m from the slope of the roof
60^0	less than 1.20 m greater than 1.20 m	0,50 m above the ridge 2,60 m from the slope of the roof

Tabela 3

However, it is required to provide an initial vertical extension of 1,5 m (minimum) in order to provide proper discharge of smoke.

4.4 COMMBUSTION AIR SUPPLY

The air required for combustion, which is taken from the environment, must be supplied by a single ventilation grill mounted on the outer wall of the room. This will ensure better combustion and thus lower consumption of pellets. It is not recommended to have outside air drawn directly from the tube, as it will reduce the efficiency of combustion. A ventilation shaft must always be equipped with one ventilation grille on the outer side as protection from rain, wind, and insects.

This hole must be made on the outer wall of the room where the boiler is located.

The supply of combustion air from the garage, a warehouse for combustible materials, or from a room where there are risks of fire is prohibited.

The opening of the outer supply of combustion air *must not be connected* by pipes.

Opening for fresh air supply necessary for combustion, *must not be connected* by hoses (limitation is hose fi 75mm, length 10 m, and maximaum 5 knees 90^0 used.

If the room has some other devices for heating, the supply of combustion air must ensure the amount of air that is required for proper operation of the all devices.

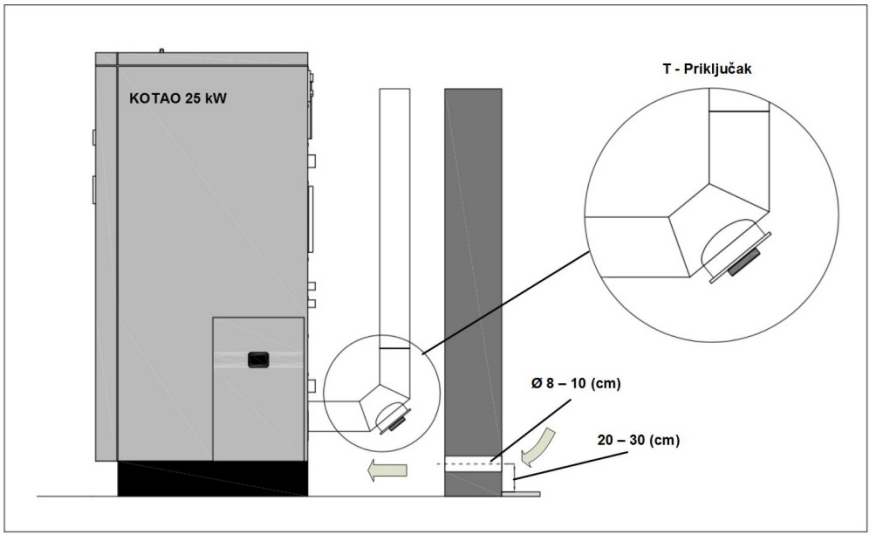


Figure 10. Minimum gaps for setting up ventilation grilles

For proper and safe placement of ventilation grilles see data given in Table 4. These are the minimum distances from each airspace or smoke extraction. This value can change the configuration of the air pressure. It should correspond to the ordering to secure that the open window draws outside air, depriving the boiler of it.

Ventilation grid must be set up at least		
1 m	under	Doors, windows, gas exhausts, air chambers, etc.
1 m	horizontally from	
0,3 m	above	
2 m	from	The smoke exhaust

Table 4: The minimum distance for the supply of combustion air

4.5 CONNECTING THE POWER

These stoves are connected to electricity. Our stoves have electrical cables that are suitable for medium temperature. If you need to replace the power cord (if it is damaged, for example) then consult with our authorized technical staff. Before you plug in the electric stove note the following:

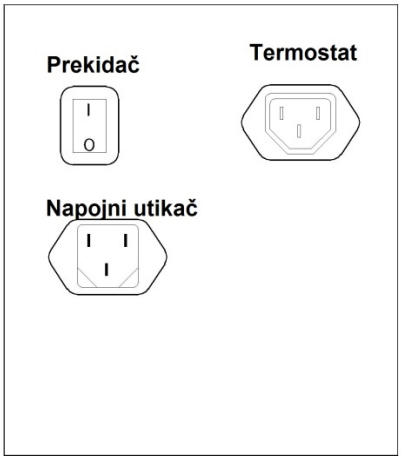
- That the characteristics of electrical systems correspond to the information that is specified in the data on the identification plate on the boiler.

- If the smoke extraction system is metal, it must have a grounding terminal in accordance with the existing standards and legislation. **Grounding is the law.**

- The electrical cable must not at any time reach a temperature that is 80^0C above the ambient temperature. When the stove is installed and placed in its spot, a bipolar switch or socket must be easily accessible.

- If the stove is not used for a long time, unplug it or switch to the switch off (0) position.

In the event of failure or malfunction, turn off the stove right away or switch to a switch off (0) position and contact an authorized service center.



5. IMPORTANT INSTRUCTIONS

THE FOLLOWING INSTRUCTIONS ARE REQUIRED FOR THE SAFETY OF PEOPLE, ANIMALS, AND PROPERTY.

We wish to inform the installer of the boiler on some of the general guidelines which must be followed for proper installation and for proper boiler mounting. These standards are required, but not complete. For further and more detailed information one needs to read the rest of this instructions manual.

- Plug the stove into an outlet that is grounded. Figure 12,
- The switch on the rear of the stove is set to position 1.
- Do not allow children or pets to be near the stove.
- Use pellets only, not other fuel.
- Notify all users about the potential risks and dangers and teach them how to handle the appliance.
- If the biler is placed on a wooden floor, then it is recommended to isolate the pedestal on which it stands.

The stove operates with a combustion chamber, which is in the negative pressure. **Therefore, make sure that the smoke is <u>well thermally insulated.</u>**

When the stove is turned on for the first time then, due to the stabilization process a small amount of paint (not harmful to health) that covers the stove vaporizes. It is therefore necessary to air the room so that it is cleared from the fumes.

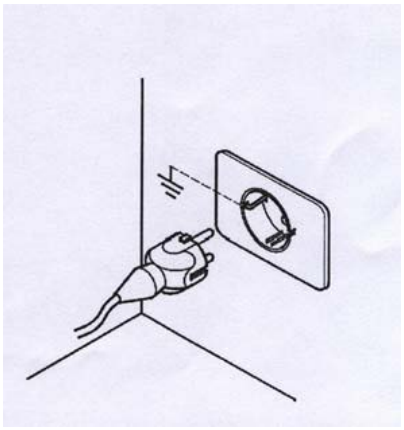


Figure 12.

6. WARNING SAFETY MEASURES FOR STAFF

<u>MAINTENANCE</u>

The contractors who work in maintenance, in addition to following all safety measures, must:

- Always use safety equipment and personal protective equipment,
- Turn off the power supply before they start working,
- Always use the appropriate tools,
- Before they begin any work on the boiler they need to keep in mind that it should be cold and that the ashes should be cold as well. They need to make sure the handles are cold as well.
- **<u>NEVER TURN THE BOILER ON</u>** if there is just one of the safety devices that is defective, improperly set up or it does not work at all.
- Do not make modifications of any kind, for any reason, other than those permitted and explained by the manufacturer himself.
- Always use original spare parts. Never wait until the components wear out before you replace them.
- Replacing the worn parts or the components of the boiler before they stop working contributes to the prevention of damage caused by accidents due to sudden failure, or breaking of the components, which can lead to serious consequences for people and/or property located around the boiler.
- Clean the firebox before lighting the boiler.
- Make sure there is no condensation. If condensation occurs it shows that there is water from the cooling smoke.

We recommend you find the possible causes to be able to establish a regular and correct operation of the boiler.

6.1 WARNING SAFETY MEASURES FOR THE USER

The place where the boiler is to be set up, called the mounting place, must be prepared by local, national, and European regulations.

The boiler is a “heating machine" and while it is on **it has outer surfaces that are very hot or that achieve very high temperatures.**

This boiler is designed to burn fuel from pressed wood mass (a pellet with a diameter of 5 mm to 6 mm, with the length of 30 mm, with maximum moisture 8-9%).

It is therefore very important to pay attention to the following when the boiler is on:

- Do not approach and touch the glass on the door, there is a BURNING HAZARD
- Do not approach and touch the smoke drain pipe, there is a BURNING HAZARD
- Do not do any cleanups
- Do not open the door because the boiler is working properly only when it is sealed
- Do not throw away the ashes when the boiler is ON
- Children and pets need to stand away from the boiler
- FOLLOW ALL INSTRUCTIONS GIVEN IN THIS MANUAL

Likewise, the proper use of biofuel pellets means:

- Only use the fuel that meets the manufacturer's instructions,
- Always follow the maintenance plan for the boiler,
- Clean the boiler every day (only when the boiler and the ash are cold),
- Do not use the boiler in case of any defects or abnormalities, in the case of unusual noise and/or suspected faults,
- **Do not spray water on the boiler, even when firefighting,**
- **Do not turn off the boiler by pulling the plug. Use the button on the board to turn off,**
- Do not tilt the boiler, IT MAY BECOME UNSTABLE,
- Do not use the boiler as a support or a holder. Never leave the tank lid open.
- Do not touch the dyed parts of the boiler while it is ON,
- Do not use wood or coal as a fuel, **but only the pellet** with the following characteristics: diameter of 5--6 mm, maximum length 30 mm, maximum moisture content 8-9%,
- Do not use the boiler to burn waste,
- Always perform all operations with maximum security measures.

7. SAFETY GUIDILINES FOR IGNITION AND CLEANING OF THE STOVE

- For turning the boiler ON never use gasoline, kerosene or any other flammable liquid. Keep these types of fluid away from the boiler while it is running,
- Never turn the boiler ON if the glass is damaged. Do not strike the glass or the door so that they do not get damaged,
- While the boiler is ON, do not open the door to clean the glass. Clean the glass only when the boiler is cold, using a cotton cloth or paper towel and a glass cleaner,
- Make sure the boiler is installed and secure to prevent any movement,
- Make sure that the ash box is inserted and that it is fully closed, so that the doors are leaning properly on the box,
- Make sure the boiler door is firmly closed while the stove is ON,
- Use a vacuum cleaner to pull the ashes from the boiler only when the boiler is completely cold,
- Never use abrasive cleaners for cleaning the surface of the boiler.

7.1 REGULAR CLEANING AND MAINTENANCE OF THE BOILER(FOR USER)

Use a drum shaped vacuum cleaner that can facilitate cleaning the boiler. The vacuum cleaner must have a filter that will prevent the sucked dust to go back into the room where the boiler is located.

Before you get started with routine maintenance, including cleaning, take the following precautions:

- Turn off the boiler from the power supply before you start doing anything,
- Before you start doing anything make sure the boiler and the ash are cool,
- Use the vacuum cleaner to vacuum up the ash from the combustion chamber ***every day*****,**
- Using the vacuum cleaner carefully clean the firebox ***every day*** (after each use and when the boiler is cold)
- **Always make sure the boiler and the ashes are cold.**

Figure 13.

Figure 14.

- FIREBOX (box-shaped) - it burns the pellets made out of wood mass. See Figure 16. It is recommended that the firebox be vacuum cleaned after each use, **every day** (when the stove is cold). Every day, it is recommended to take out the firebox and to make sure that there is no residual ash at the bottom of it, as well as unburned pellets that were collected at the bottom of the firebox. Then put the firebox back and set it firmly into place to ensure the safe running of the boiler. The firebox must sit straight - horizontal, it must not be tilted!

If you are not sure, do not hesitate to call an authorized service center for explanation and additional information, since the manufacturer does not know what the situation is with the connection and maintenance of the boiler and gives no warranty for the connection of the boiler and its maintenance.

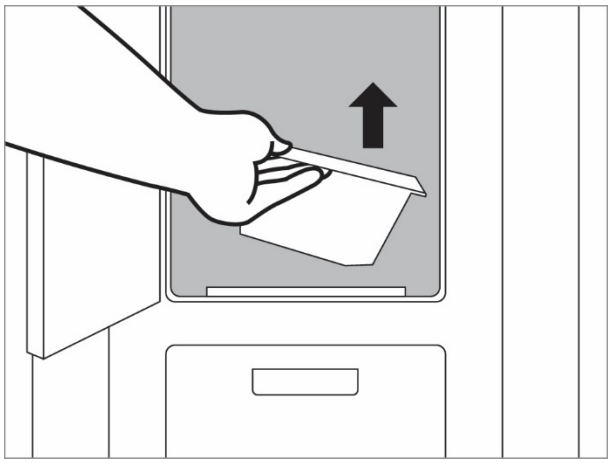


Figure 15. Burner guidance removal

The manufacturer does not assume any responsibility for damage caused by third parties.

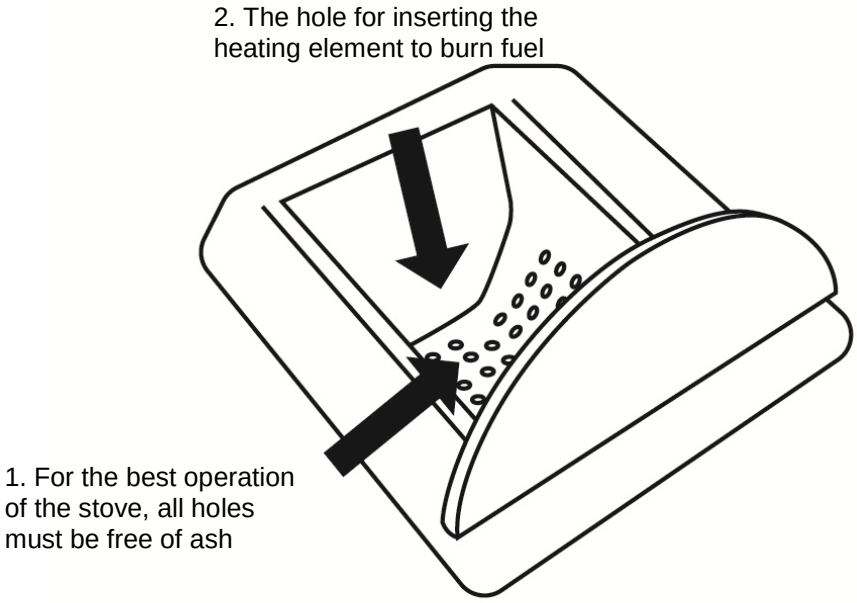


Figure 16a. compact 25

Figure 16b. Compact 33

The ash container should be vacuumed or emptied if it is full...

Figure 17. Ash container

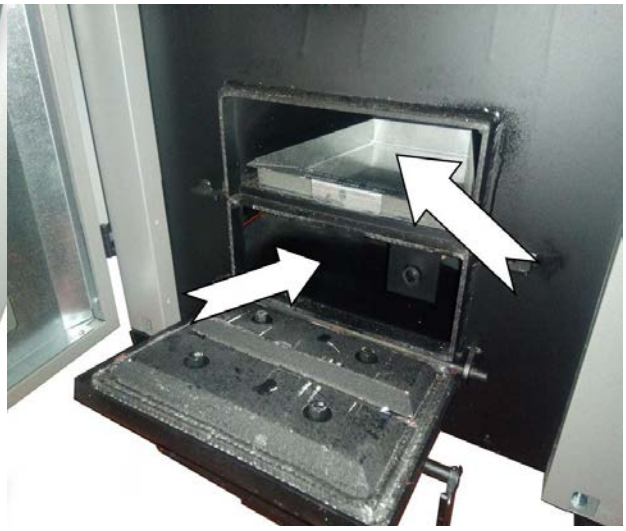


Figure 18. Vacuum the dust bin

Make sure the boiler and the ash are cold.

Upper ash container must be cleaned ***every or every other day,*** by vacuuming or by simple throwing the ashes away. This will get rid of any impurities that remain inside when the pellets are burning. The container then has to be returned to its proper place. Never put a pellet that has not burned in the ash container.

Lower ash container must be cleaned ***once every five or 7 days,*** by vacuuming or by simple throwing the ashes away. Before that, loosen the two butterfly nuts. This will get rid of any impurities that remain inside when the pellets are burning.

At the same time, use a vacuum cleaner to suck up the ash in the smoke chamber through an opening in the front of the boiler bottom ash tray.

The container then has to be returned to its proper place.

- SMOKE PIPES IN THE BOILER

They need to be cleaned manually with a special key for every 150-180 kg of spent pellets (two full tank of pellet). First use the key to lift up small round lids with openings, two of them, that are located on the cover of the stove at the top. Using the same key go into the openings of the lever - the pins which are connected to the cleaning levers, and dust them a few times by lifting them up and putting them down, as shown in Figure 19.

Figure 19. Cleaning the turbulators on boiler

Clean the boiler only when it is cold. At the end of the cleaning, push the button all the way back (pull it) so that you can see the button and the bar of the cleaning mechanism.

-GLASS EYE (check and clean periodically):

Make sure the stove and the ash are cool.

Clean the glass with a soft cloth. Glass is made from pyrocheramics resistant to high temperatures. In case of damage, before re-using the stove, replace the glass. The glass must be replaced only by the authorized persons.

Smoke exhaust fan area should be checked and cleaned every six months.

Make sure the stove and the ash are cool.

Cleaning the interior flue exhaust is done by first removing the cover on the bottom of the box for the ashes and inserting the vacuum cleaner hose through that hole, as to vacuum out the remaining ashes Figure 22.

- GENERAL CLEANING AT THE END OF THE HEATING SEASON

Make sure the stove and the ash are cool - unplug the boiler from the power supply.

At the end of the heating season, to be safe, unplug the boiler from the power supply. It is important to clean and check the boiler, as explained in the above points.

Make sure the boiler and the ash are cold.

After prolonged use, it is possible that the sealing tape for sealing the door separates. This sealing tape sticks to the door with silicone resistant to high temperatures. To resolve this, tape the back of it using an adhesive that is resistant to high temperatures. This is very important for good sealing of the doors.

7.2 CLEANING AND MAINTENANCE (for employees who do maintenance)

FLUES - CHIMNEY should be cleaned every six months or after burning two tons of pellets.

Make sure the stove and the ash are cold.

The smoke channel (chimney) is resistant to wind and has to be checked and cleaned every year, best at the beginning of the heating season. It is best to pay the authorized professional contractors for their cleaning. The places that need special attention when cleaning are shown in Figure 20.

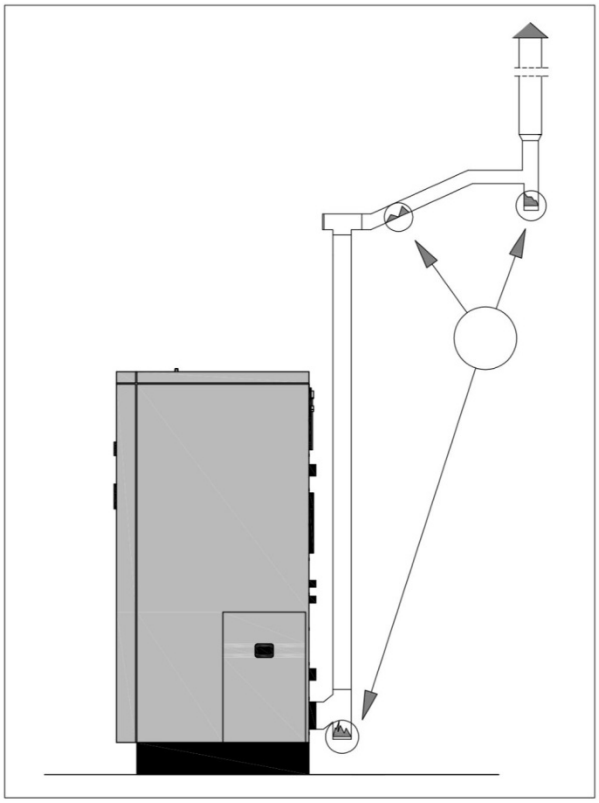


Figure 20. Places that need to be cleaned at least twice a year.

7.3 SPECIAL MAINTENANCE

Your boiler is a heat generator that uses pellets as solid biofuel. This is why you should do special maintenance once a year.

This is best done at the beginning of the heating season.

The purpose of the special maintenance is to ensure proper and efficient operation of the boiler.

8. IMPORTANT SAFETY INFORMATION

You have purchased a product of the highest quality.

The manufacturer is always at your service to provide you with all the information you may need regarding the boiler and instructions for assembly and installation in your geographical conditions. Properly connecting the boiler, according to these instructions, is very important to prevent the danger of fire and any defects.

The boiler works with a combustion suction pressure. **Therefore, make sure that the smoke is well thermally insulated.**

DANGER !

In case of fire in the smoke exhaust pipe take all the people and pets out of the room, unplug the power supply using the power switch in the house or remove the plug from the wall (plug must always be easily accessible and free of obstacles), and immediately call the fire department.

DANGER !

You cannot use conventional firewood.

DANGER !

Do not use the boiler to burn waste.

9. THE PELLET QUALITY IS VERY IMPORTANT

This boiler uses pressed wood (pellet) as fuel.

As there are many products like this on the market it is important that you select pellets as fuel that is not dirty. Make sure you use high quality pellets that are compact and with a little bit of dust.

Ask your sales representative or the manufacturer for the best pellet, with a diameter of 5 - 6 mm, the longest side 30 mm. **Proper operation of the boiler depends on the type and quality of pellets, since the heat obtained from different types of pellets can be of varying intensity.**

When the pellet is poor quality the boiler will have to be cleaned more often.

Manufacturer of the boiler does not bear any responsibility for poor performance of the boiler in case of use of the pellets of inappropriate quality.

9.1 STORING THE PELLET

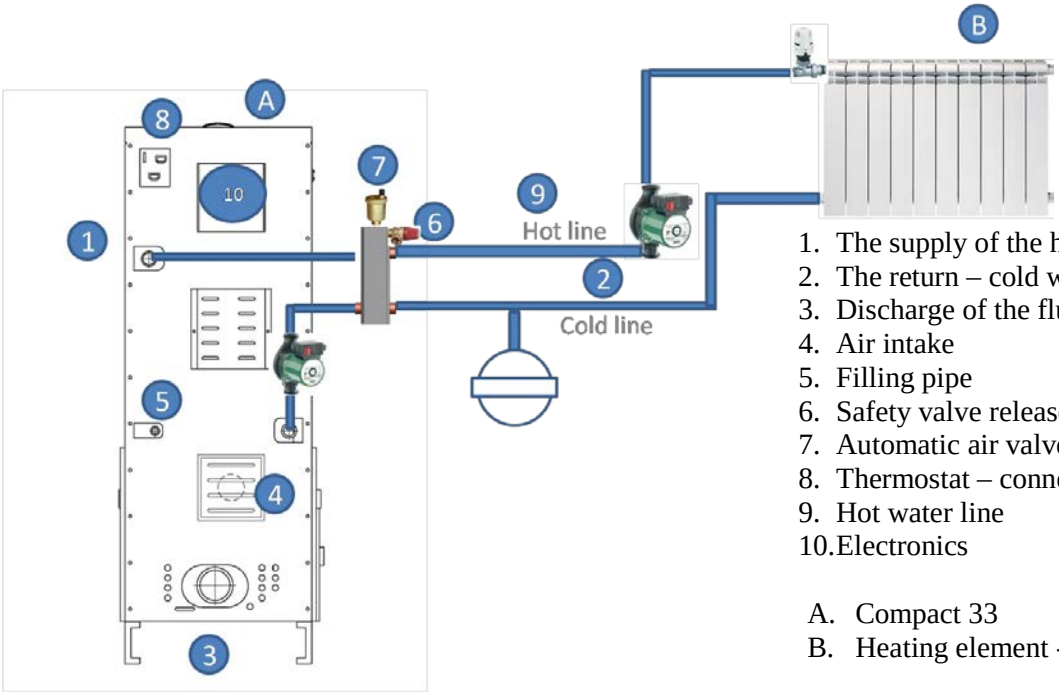
The pellets must be kept in a dry place that is not very cold. Cold and moist pellets (at the temperature of around 5^0C) reduce the thermal power of the fuel and require additional cleaning of the boiler.

THE PELLETS MUST NOT BE KEPT CLOSE TO THE BOILER. Keep them at least 2m away from the boiler. Handle the pellets carefully and do not break them.

WARNING: If the fuel tank is filled with sawdust or small (decomposed) pellets, it can prevent the insertion of the pellets. Such pellets can lead to burning the electric motor that drives the mechanism for the insertion of pellets, or damage the gear that works in conjunction with this electric motor. If the bottom of the pellets reservoir, or, at the bottom of the gear unit when the tank is empty you see such a pellet, suck it up with a vacuum by swiping the tube through open grates of the pellets.

10. CONNECTING THE HYDRAULIC INSTALLATION

SCHEME OF HYDRAULIC INSTALLATION



1. The supply of the heating system
2. The return – cold water
3. Discharge of the flue gases
4. Air intake
5. Filling pipe
6. Safety valve release
7. Automatic air valve
8. Thermostat – connector
9. Hot water line
10. Electronics

A. Compact 33
B. Heating element - Radiator

Figure 21.

IMPORTANT:

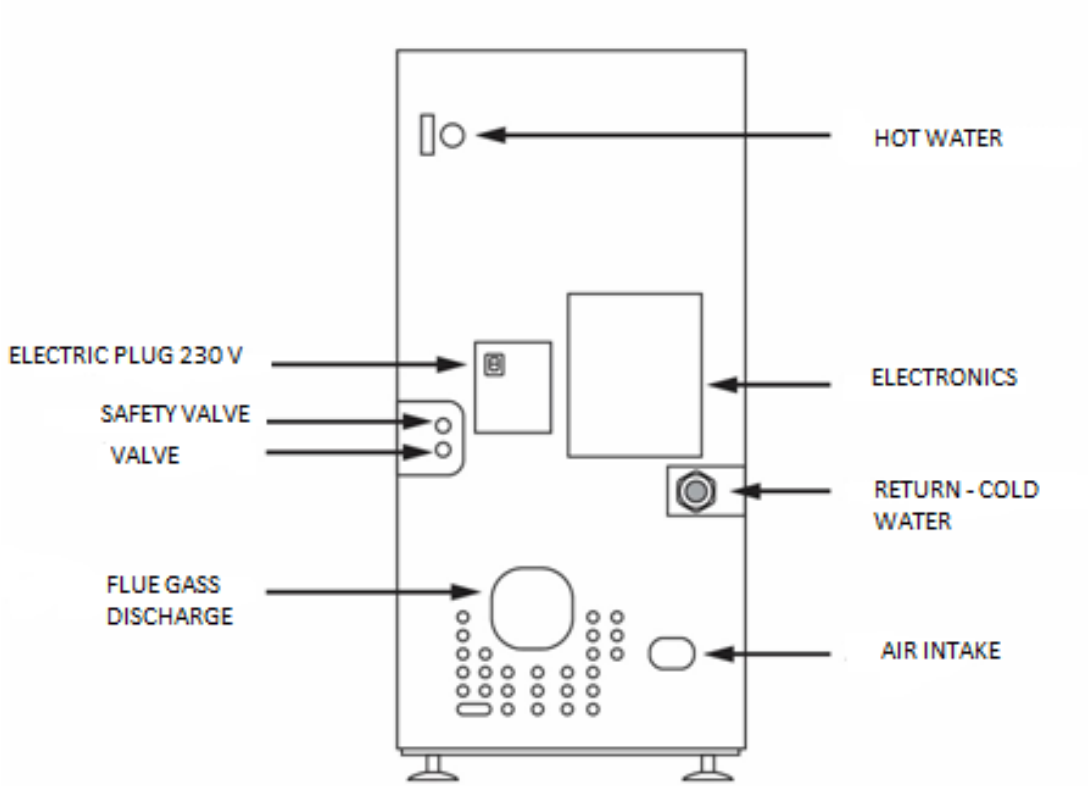
Connecting the stove on a hydraulic installation can be done exclusively by qualified technicians, who can do this in accordance with applicable regulations of the country in which the installation is done.

Producer disclaims all liability in case of a material or bodily harm, in the event of failure, poor functioning, if the above recommendations are not followed.

The boiler is designed for central heating.

The boiler is prepared for a closed heating system. Follow the SRPS guidelines.

The back of the boiler with the connectors is given in Figure 22.



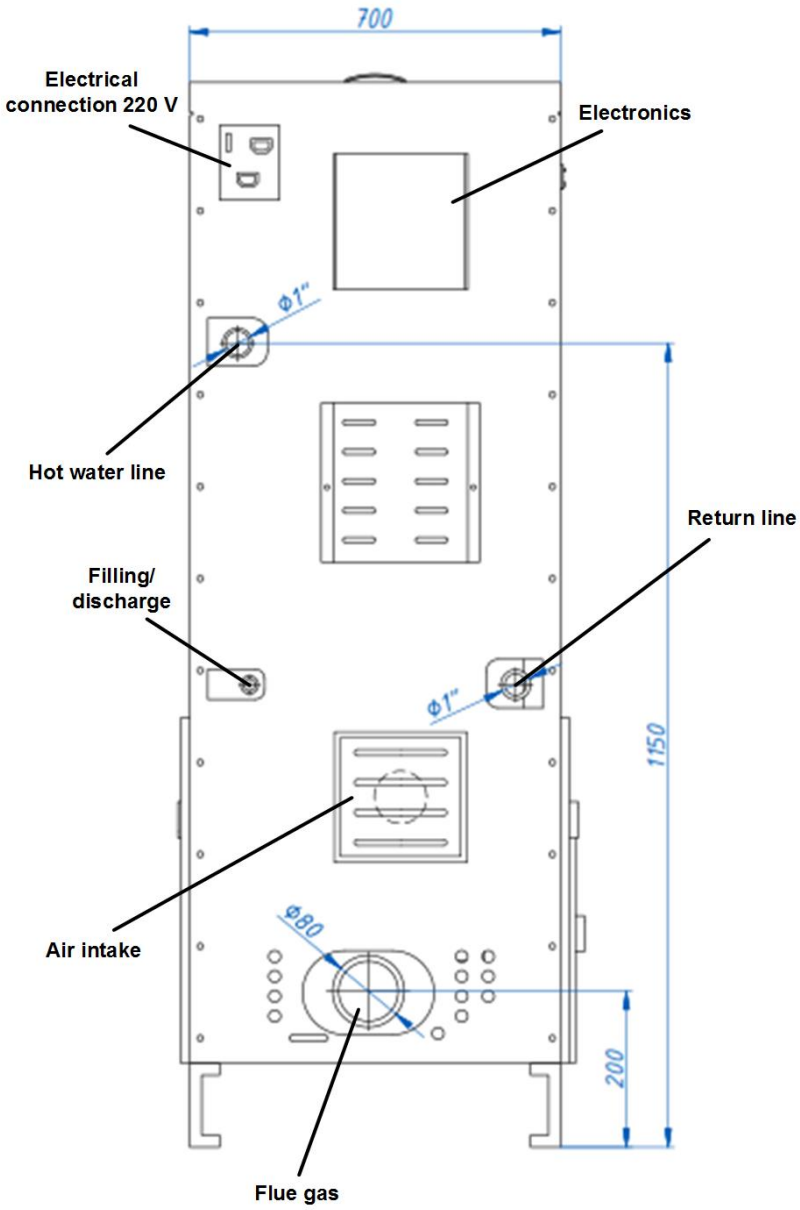


Figure 22.

11. PRESSURE AND RETURN PIPE

Outputs of the pressure and return pipes on the boiler are 1" and you cannot reduce them or taper to the first bifurcation. Use a 1'' steel pipe or a copper pipe with the outside diameter of Ø28mm or greater.

When installing, strictly observe the slopes of pipes as they need to be at 0.5% (5mm. per meter of pipe) and the venting system (boiler, pipes, radiators).

Set up a thermo hydrometer at the pressure line to show the water pressure in the system and the water temperature at the back end of the boiler.

12. BUILT-IN COMPONENT OF THE BOILER

Note:

If the boiler and the pump have been idle for a long time (a month, for example), the pipe shaft can stick to the base, it may not move the water, or it can burn out. If when starting the boiler when the water in the boiler heats up the water pump does not start, if the radiators do not heat up when the set temperature is reached, if you do not hear the murmur of water (moving), or if the boiler temperature rises and radiators are not warming, remove the left lateral side as indicated in the previous paragraph, and get to the pump. Put a cloth under the pump and using a flat screw driver with the tip width of 5 - 7mm, unscrew the short screw from the front of the pump. There will be a little bit of water coming from the pump, which is normal.

Push the screw driver into the opening of the pump, reach the groove of the pump shaft and rotating the screwdriver and the shaft to the right and left break in the pump shaft. Put the pump screw back in its place into the opening of the pump and tighten it. Make sure that the rubber from under the screw does not come out.

12.1 AUTOMATIC AiR VALVE

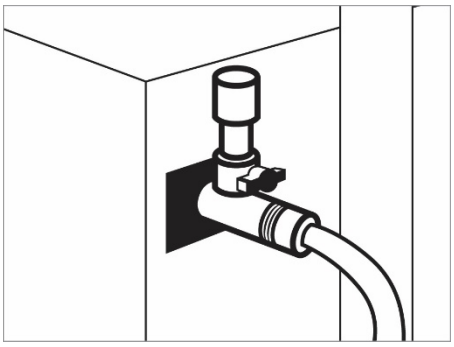


Figure 23.

The cap valve must be loose, not tight, so that the air can come out of the boiler and installations smoothly.

The boiler must be full with water without air. With the first charging system in the boiler and every year before the start of the heating season all air from the system needs to be removed.

IN CASE WHERE THE SYSTEM IS EQUIPPED WITH MANUAL AIR VENT:

By FIRST START-UP boiler is vented (as radiators) and wait for the system to work 15-20 minutes (radiators warm) then re-vent the boiler. After that, venting the system is not necessary as long required pressure is maintained inside of system. In case when pressure of liquid inside of system drops down below 0,5 bars it is necessary to recharge and vent the system again as it is done with first starting of boiler.

WHEN INSTALLED AUTOMATIC AIR VALVE SYSTEM WILL VENT BY ITS SELF.

12.2 EXPANSION VESSEL

The function of the expansion vessel on the heating system is to stabilize the pressure in the boiler and in the heating installations. The factory preset pressure in the vessel is 1.5 bar if it is not, it is necessary to adjust it. On the basis of the total amount of water in the heating system and the boiler, it is necessary to install the appropriate expansion vessel on the system. The size of the vessel according to the rough estimation makes up 10% of the total amount of water in the heating system and boiler.

In the case where the heating system is greater than defined in the above text, it is necessary to install an additional or larger expansion bottle for a higher amount of water. The main indicator of an inadequate expansion vessel is unstable pressure in the heating system.

12.3 CHARGING AND DISCHARGING TAP

As the name itself says - this is a tap for charging and discharging. The boiler has an outlet for the connection, not the particular tap that is purchased separately.

It needs to be installed on the back of the boiler at the bottom. Input connection is recommended to be R1 / 2 ", while the output should have an extension for the hose.

13. INSTALLING AND IGNITING

Before boiler start up, the system must be filled with water and free from air bubbles. Chimney must be connected as described in previous chapters.

System must be filled with cold water up to the pressure between 1 to 1.5bar (cold water pressure). The boiler has internal pressure valve protection that opens at 3 bars.

NOTE:

The stove must not be used without water. It must be tied to the installation to which the consumers are connected (radiators) with minimum power of 9 kW.

14. PRACTICAL INSTRUCTIONS AND TIPS FOR THE USE OF THE HEATING SYSTEM

-All connections must be well sealed and fastened. There must be no leakage of water.

-Before you turn the boiler on for the first time, the complete installation shall be tested with water at a maximum pressure of 1.9 bars.

-It is preferred that the water be at least once released out of the system due to the dirt which is located in the system.

-Make sure that all valves between the boiler and the installation are open.

-Make sure that all the air from the boiler and installation is released before placing the boiler in operation. For this reason, the installation should be filled with water slowly so that the air manages to get out of the installation.

-During the ignition and cooling phase, the boiler can expand and contract, and at the same time you can hear little crackling. This is absolutely normal, because the structure is made of steel and this certainly cannot be regarded as a disadvantage.

Basic programming that is done in the factory guarantees proper operation and prevents overheating problems when you first turn on the boiler and for later as well.

15. FILLING WITH WODEN GRANULES

Refuelling is done on the upper side of the boiler by opening the lid. Put the wooden granules in the tank. Its load capacity when it is empty is about six 15 kg bags, a total of 90kg of pellets. -compact 33;
five 15 kg bags, a total of 75 kg of pellets – compact 25.

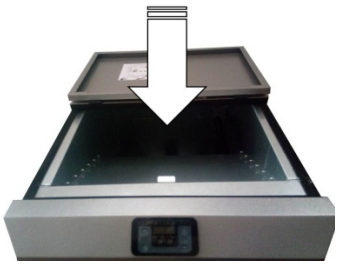


Figure 24:

Please make sure you fill pellet just inside pellet tank

Figure 25:

The surround of the seal the cover of the pellet should be clean and without pellets

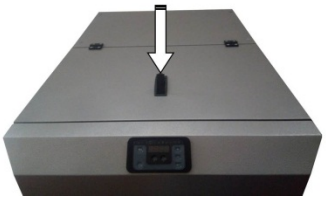


Figure 26:

The cover of the pellet reservoir should be tight

To simplify the procedure, do this in two stages:

-Put half a bag into the tank and wait until the pellets reach the bottom. Turn the boiler on.
-When the boiler starts to work normally put the pellets as needed in the storage for pellets.
-Do not ever remove the security grid from the tank. When putting the wooden granules in, prevent the bag from coming into contact with hot surfaces.

16. DESCRIPTION AND MODE OF OPERATION OF THE CONTROL SYSTEM

16.1 DESCRIPTION OF THE TOUCH BUTTON DISPLAY

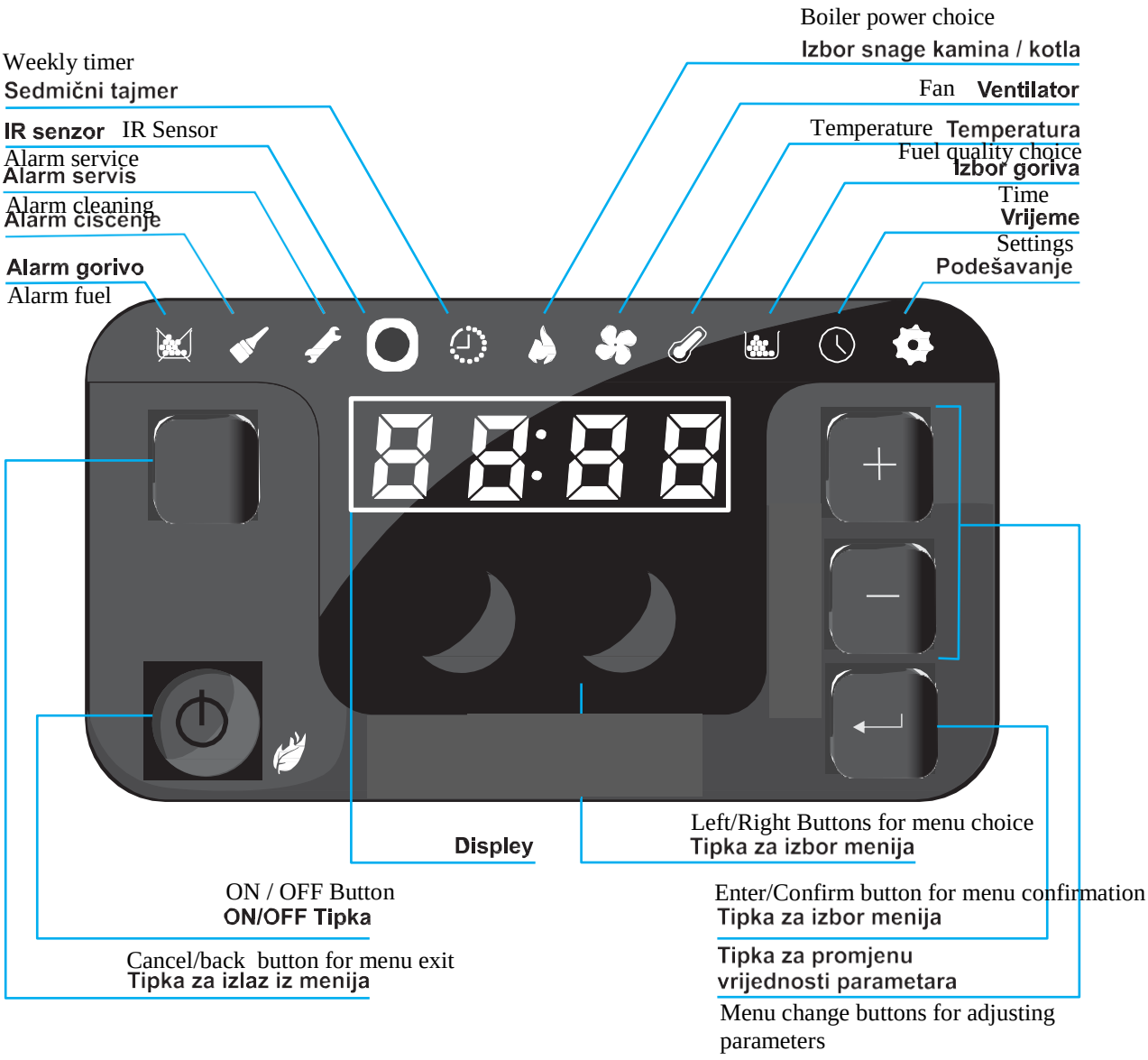


Figure 27

Key layout	Description of functions
	ON / OFF button is used for switching on and off the fireplace/boiler. To start, press and hold the button for a few seconds
	Navigation buttons are used to (Menu), select menu displays the appropriate icon at the top of regulation. Besides these keys are used to edit parameters
	The keys to increase / decrease used to edit parameters, when selected value blink
	The Enter key is used to enter the editing mode and confirm the set value value blink
	Cancellations key is used to discard the changes and return back one level in the menu value value blink

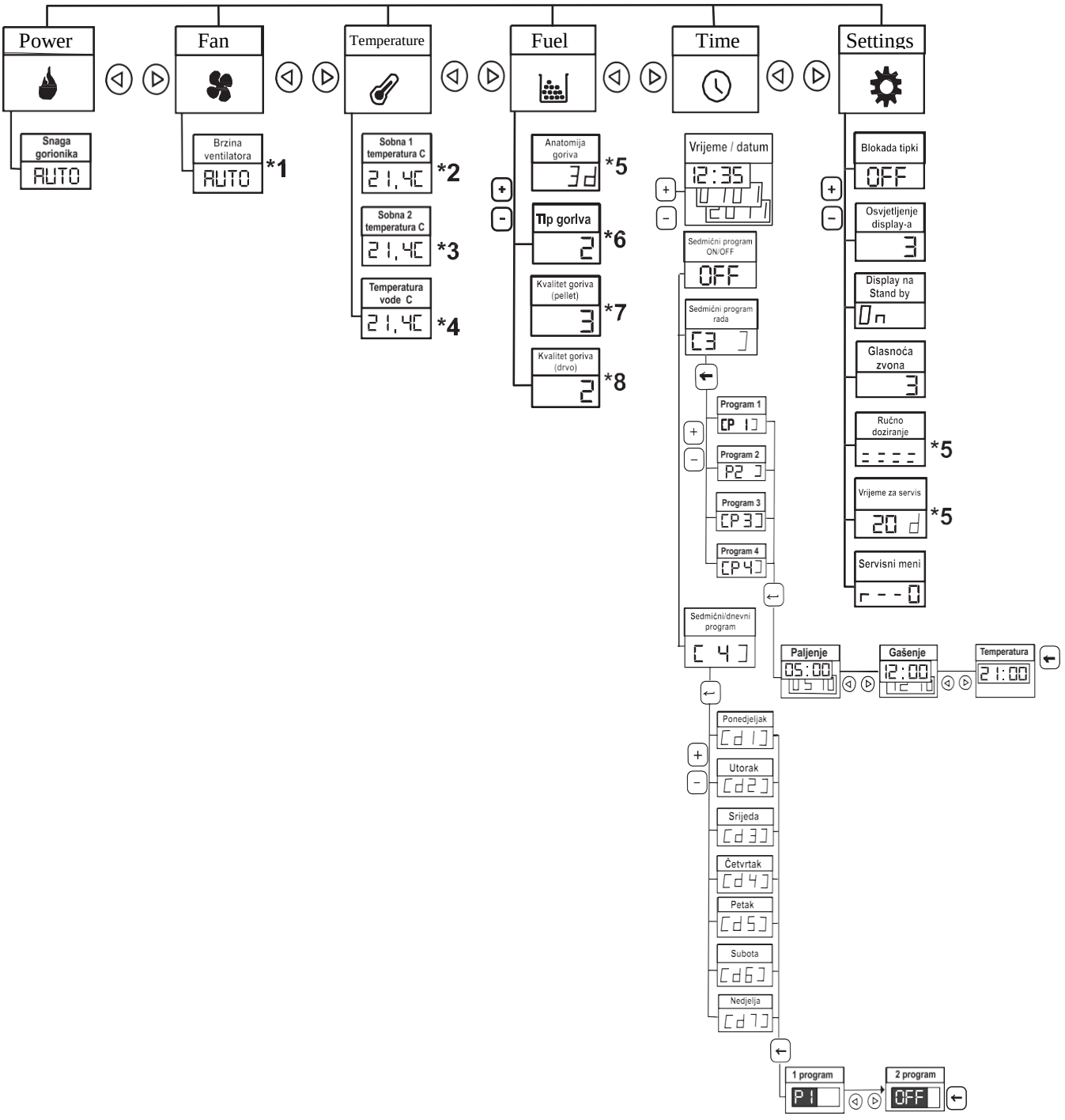

Power
Snaga gorionika
AUTO
Fan
Brzina ventilatora
AUTO
*1
Temperature
Sobna 1 temperatura C
21,4C
*2
Sobna 2 temperatura C
21,4C
*3
Temperatura vode C
21,4C
*4
Fuel
Anatomija goriva
3d
*5
Tip gorlva
2
*6
Kvalitet goriva (pellet)
3
*7
Kvalitet goriva (drvo)
2
*8
Time
Vrijeme / datum
12:35
Sedmični program ON/OFF
OFF
Sedmični program rada
Program 1
Program 2
Program 3
Program 4
Sedmični/dnevni program
Paljenje
05:00
Gašenje
12:00
Temperatura
21:00
Ponedjeljak
Utorak
Srijeda
Četvrtak
Petak
Subota
Nedjelja
1 program
P1
2 program
OFF
Settings
Blokada tipki
OFF
Osvjetljenje display-a
3
Display na Stand by
On
Glasnoća zvona
3
Ručno doziranje
*5
Vrijeme za servis
20 d
*5
Servisni meni

Figure 28

16.2. Use and regulation control

Boiler is switched off

Starting of the boiler is done in such a way that the button ⏻ is touched and kept for 3 sec to occurrence indication “ON” on the display

After which the boiler goes into automatic mode “AUTO”. Time ignition and flame stability testing lasts until approximately 20 min, after which the boiler goes into the normal mode of operation.

16.3. Modulation

By touching ENTER ↵ the value of The display begins to flashes, the keys ± we perform regulating power burners from 1 to 5 and confirm by touching ENTER ↵ key. The value of AUTO enables automatic control of power burners as needed, which at the same time we as the manufacturer recommends.

In cases where forced to put out the fire or to run boiler off by pressing button on/off ⏻ the ignition process, the ALARM will appear along with beep for boiler cleaning. Then you have to wait for the fan blowing to finishes, clean the burner manually and then hold the start button on/off (2-3 sec) to reset the error for cleaning, then boiler is ready to re-ignition by holding again on/off button.

The next indication of the upper part of the regulation is the fan whose strength is programmed to a set program of boiler and cannot be changed, so it do not provide any setting option.

Pressing the Menu on the RIGHT ▶ conditionally skips a selection of fan indication and go to the current temperature in the fireplace/boiler.

If you want to check or set boiler temperature, press the Enter ↵ key and the display begins to flashes. Then use buttons ± to change values and input new temperature. Be sure to confirm the value with the ENTER ↵ key.

Next pressing RIGHT ▶ arrives at an indication for you to choose the type of pellet. This option allows us to adapt the boiler to the quality of pellets. There are modes for three types of pellets. By touching ENTER ↵ button this value on the display flashes, by adjusting with buttons ± changing the value or mode of operation of the boiler according to the quality of pellets.

When you change these values, it is necessary to take care of the burning of the pellets, the rest amount of ash in the burner. If mode is appropriate, the boiler will work without problems. If not, there is possibility of increased consumption, periodic shutdowns of the boiler, large amount of ash etc.

Next menu with an indication (Clock) is used to set the time and date of the regulation. By touching ENTER ↵ the hour value start to flashes. Changing the value of an hour is changing by buttons ± on regulation. Once you are inside of time menu you can navigate to the right with button RIGHT ▶ to change time and date by navigating with buttons ±.Once you changed all needed you need to confirm it with only once touching button ENTER ↵.

Continue with button RIGHT ▶ and you will see a change in the value of the date. The same procedure of changing values as well as for time setting.

After setting the date values, touch again button RIGHT and you will see a option for year, also flashing. Use buttons to choose value of the year.

Once again touch RIGHT button and you will see a value days of the week.Touch the to input day of the week:

1 = MONDAY
2 = TUESDAY
3 = WEDNESDAY
4 = THURSDAY
5 = FRIDAY
6 = SATURDAY
7 = SUNDAY

Be sure to confirm end of the selected Entry with the ENTER key, and then display stop to flashes and screen showing set time.

16.4. TURNING THE BOILER OFF and ON

TURNING OFF

Pressing the **ON/OFF button** for longer than about 2 seconds while the stove is running the display shows **OFF.** Once the button is released, the boiler begins the process of turning off. The screw conveyor stops, fans operate at maximum speed to clean the firebox. Once the combustion chamber is cooled down to the appropriate temperature, the boiler shuts down and goes into sleep mode. The display will read back to whatever you had chose to see on the display**.**

TURNING ON

Pressing the **ON/OFF button** for longer than about half a second while the boiler is not running the display shows ON for a short time period then returns to show on display whatever user choose to see before action**.** Once the button is released, the boiler begins the process of turning on. The display reads back to whatever option you chose to see before, fans are working at adequate speed, screw conveyor will start moving, the lighter is heated. After that, if the temperature of the boiler is low, it will start the process of HEATING UP stage in which the pellets are quickly dispensed and the fans is moving on adequate speed. After that the boiler reaches the conditions for transition thru couple stages till reaches to the normal burning phase.

16.5. SETTING UP THE TIME-CONTROLLED PROGRAM

The process of adjustment is particularly important for every segment of the regulation of the fireplace/boiler, and any incorrect settings can lead to a malfunction of the stove, the simplest example would be wrong adjustment of dates or time, which automatically associates the programmed work time and burning of stove.

Apart from this menu to setup time with the touch of the button [+] we open the submenu for programming time regime of the boiler operation. Alone regulation has the option of programming to the boiler for six switching times for each day separately

Touch the [+] key on the display briefly Appears C2 exceeding to OFF which Is a sign that the Time mode is switched off

By touching ENTER [↵], the value of The display, OFF, starts to blink, and Then the button [+] to start on a time Regime of the work program, the display shows ON

When we want to put out the Time mode, on this menu touch the ENTER [↵] button and then touch [-] button and the value on the display goes from ON to OFF, and keep flashing until you touch ENTER [↵] for confirmation.

If you want to program the time of boiler operation, or its switching on and off after the work program set to ON, then touch the ⊞ and you will see to program C3.
After that by touching menu button ENTER ↵ button to open the submenu (P1) – (P6), which is used to set the switching times.

The program P1, P2 and up to P6 represent 6 different values you can set up through the week user may need to program for boiler to start on and off. But for single day you can program only three turning off and three turning off. By touching the ENTER ↵ when on the display is showing P1, you will enter Programming 1 where you have option first to set value of the time you need for stove to turn ON, after that touching the button RIGHT ▶ you will go to time when boiler need to shut down, after configuring this one follow again RIGHT ▶ button for setting the temperature of the WATER inside of boiler for this period you are programming. Normal is to set it up more than 65^{o}C for normal boiler operation.

Figure 29: Showing the navigation through the menu timer

Every change of settings on display after is completed need to be confirmed by touching button ENTER ↵

16.6. ELECTRICITY SCHEME

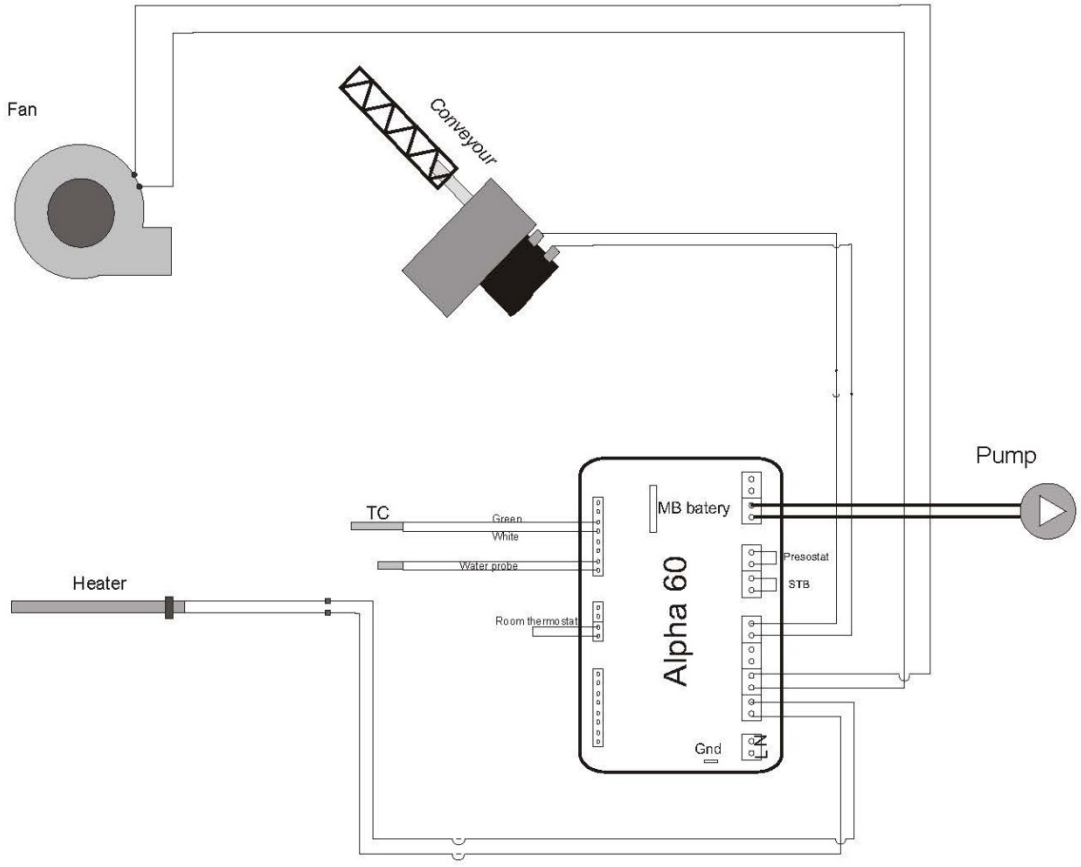


Figure 30: Electricity scheme

16.7. Menu

The last menu on the main screen, with the navigate key RIGHT ▶ is SETUP. The display when you open this menu writes OFF, This symbol indicates that all the menus and buttons on the control unit are unlocked. In this menu there are two levels of protection of keys on the control unit, or blockage of using regulation to children and people who are unable to manage the operations of the boiler.

Pressing the ENTER ↵ , the value of the display (OFF) flashes, then touching the + button and move on to (LOW) a lower level of protection of the control panel.
With this protection is only possible to turn on or shut down the fireplace/boiler, all other options are locked.

With the further touching button + move on (HIGH) a high level of protection, which locks the control panel, where is not possible to change any value in the regulation, and even shut down or turn on the boiler. Return to Settings by the simple push of a button

By pressing the button + we open the submenu C2, which is used to adjust the brightness of the display. After a short period of time to display the C2 change to number 5, where number 5 indicates the maximum output brightness of the display. By tuching the key ENTER ↵ this value starts to flashes, and by touching the ± regulates the brightness of the display from 1 - 5, confirm the completion of the setting value with ENTER ↵.

Continue by pressing the + we open new submenu C3, which after a short period of time turns into OFF. This menu serves to activate the STAND BY (ready, waiting for) operating modes of the display. Pressing the ENTER ↵ key value begin to flashes.

Switching the value with buttons ± changing the display mode. For example, switching to a value of 1, on stand by the regime display randomly showing temperature and time. When it switch to OFF, the display retains to the set menu, so for example AUTO, temperature or time. Chosen values confirm with ENTER ↵.

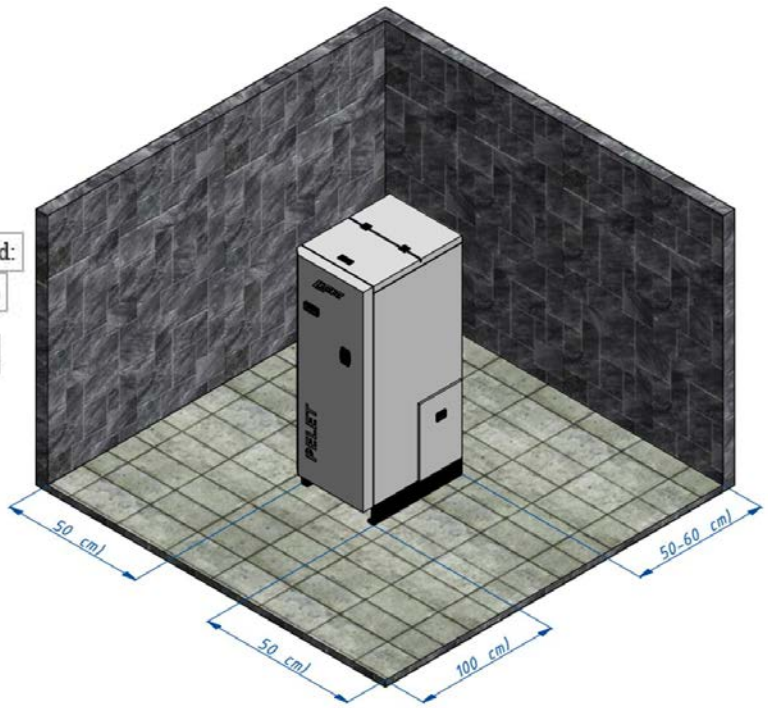
Further pressing button + we move to the next submenu C4 which serves to adjust the strength of the sound signal of regulation. The value in the display C4 turnes in to value of 5, which means that the sound is set to the maximum signal strength. By pressing ENTER ↵ we open this menu by pressing buttons ± to adjusts corresponding value. After completion confirm with ENTER ↵. .

Sub menus C5 and C6 are programmed and their values **DO NOT CHANGE**

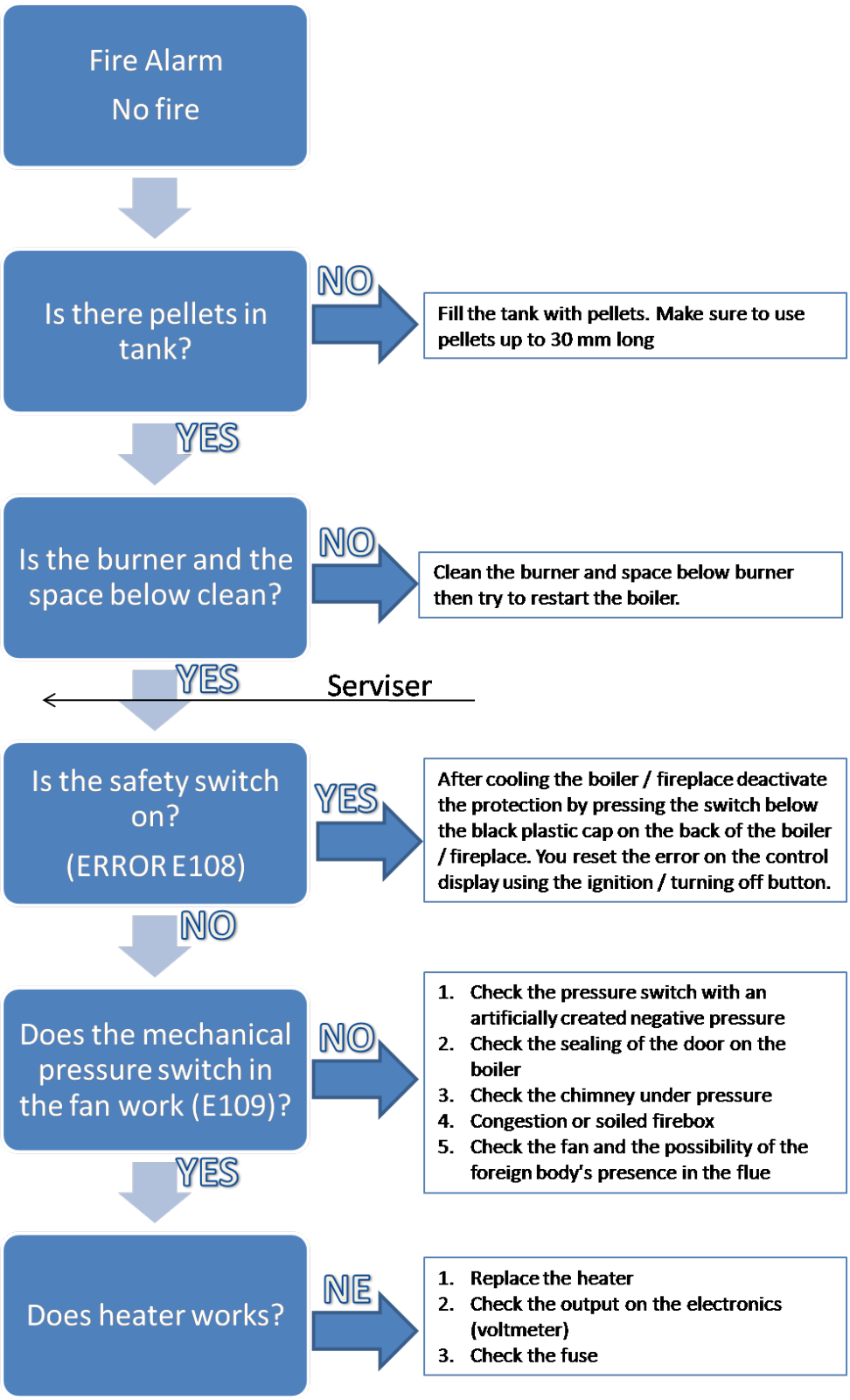
After turning off the boiler fan remains in operation a few more minutes in order to extract the residual gases produced by burning (possible increase in temperature after turning off). Fan operation is almost silent except for the sound of possible flow of air through the chimney, no other sounds (pay attention to the insulation of the chimney at the entrance to the chimney and pipes of the heating system at the entrance through the wall where can occur vibrations transmitted as humming). It also humming may be transmitted through the chimney in certain cases, particularly evident if it is not a well done chimney, with a low height.

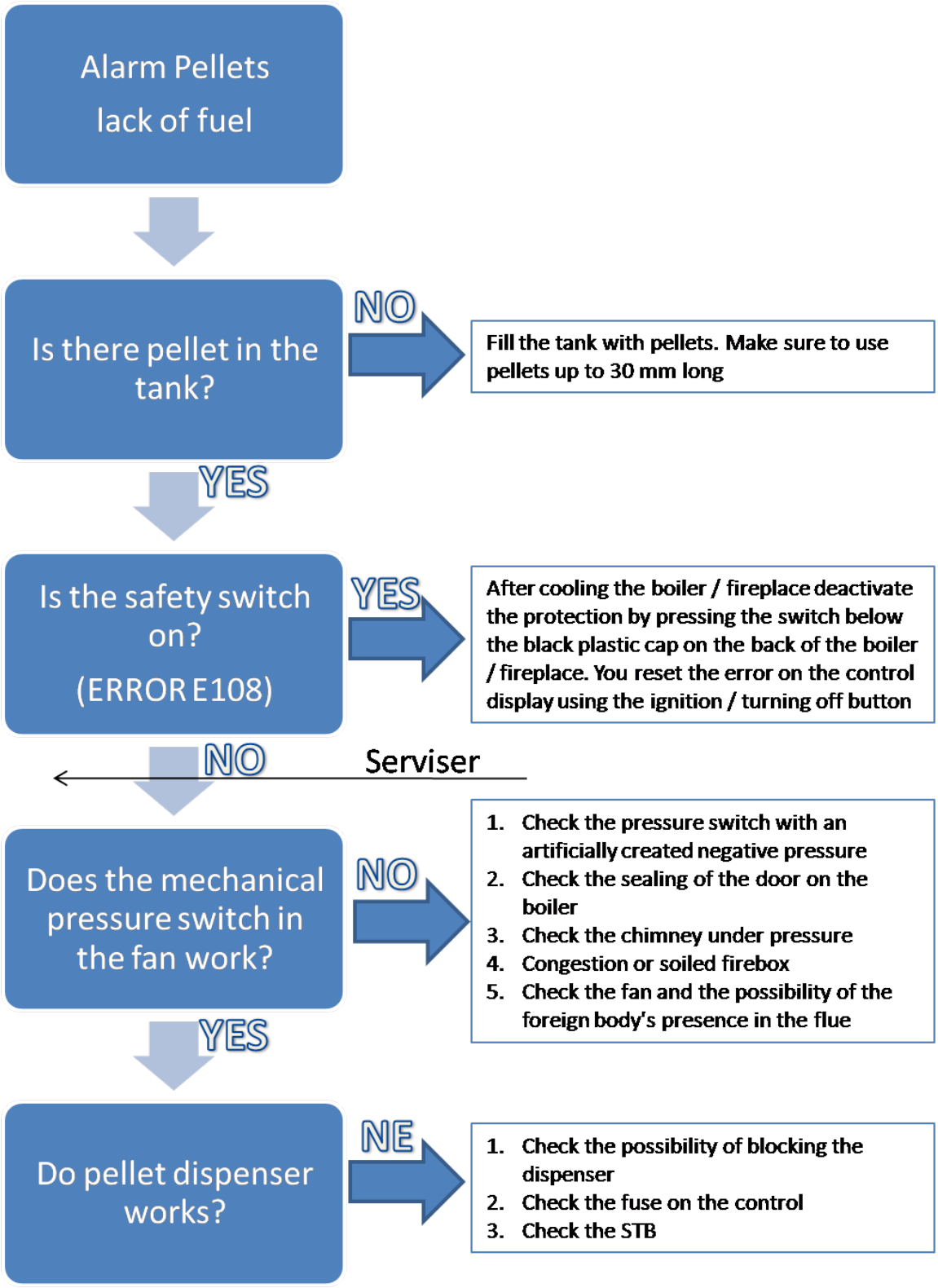
When installing the boiler it is recommended:

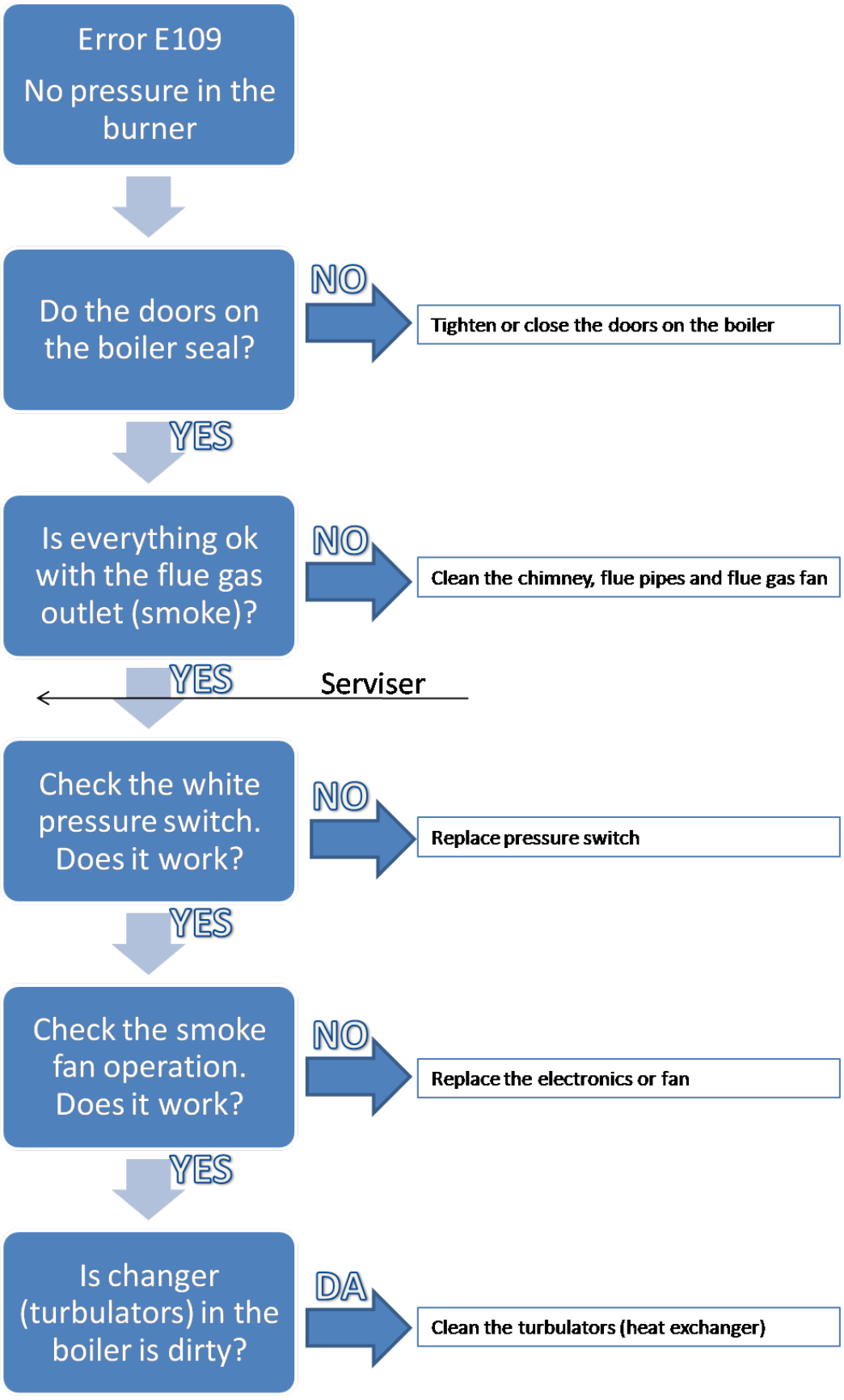
- Flat and hard surface (concrete, etc.)
- Free space on the back - 50 cm
- Free space on the sides - 50 - 60 cm
- Free space on the front side - 1 m

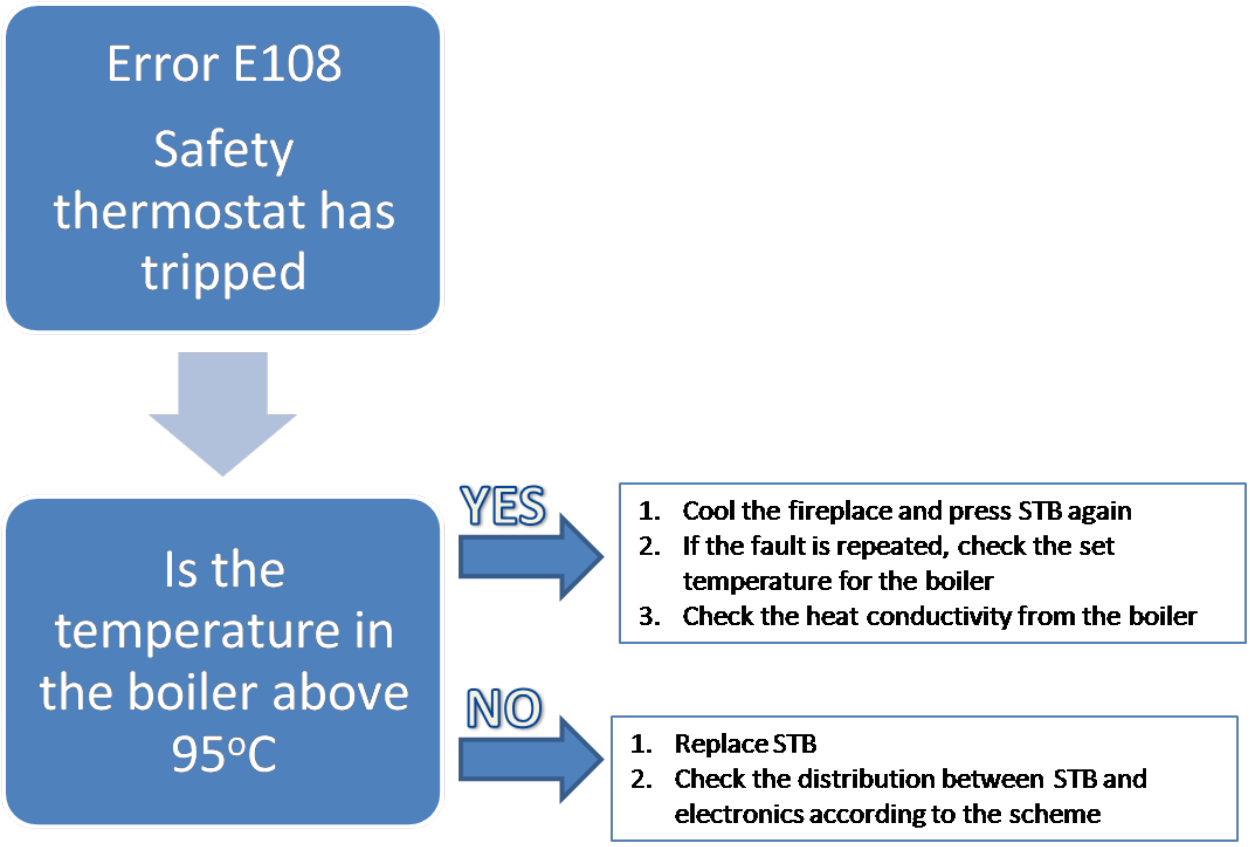


16.8. ALARMING SITUATION




Alarm Pellets
lack of fuel
Is there pellet in the tank?
NO
Fill the tank with pellets. Make sure to use pellets up to 30 mm long
YES
Is the safety switch on?
(ERROR E108)
YES
After cooling the boiler / fireplace deactivate the protection by pressing the switch below the black plastic cap on the back of the boiler / fireplace. You reset the error on the control display using the ignition / turning off button
NO
Serviser
Does the mechanical pressure switch in the fan work?
NO
1. Check the pressure switch with an artificially created negative pressure
2. Check the sealing of the door on the boiler
3. Check the chimney under pressure
4. Congestion or soiled firebox
5. Check the fan and the possibility of the foreign body's presence in the flue
YES
Do pellet dispenser works?
NE
1. Check the possibility of blocking the dispenser
2. Check the fuse on the control
3. Check the STB


Error E109
No pressure in the burner
Do the doors on the boiler seal?
NO
Tighten or close the doors on the boiler
YES
Is everything ok with the flue gas outlet (smoke)?
NO
Clean the chimney, flue pipes and flue gas fan
YES
Serviser
Check the white pressure switch. Does it work?
NO
Replace pressure switch
YES
Check the smoke fan operation. Does it work?
NO
Replace the electronics or fan
YES
Is changer (turbulators) in the boiler is dirty?
DA
Clean the turbulators (heat exchanger)



- Code E001 : error on the keyboard
- Code E101 : Excessive water temperature
- Code E105 : NTC2 error
- Code E106 : NTC3 error
- Code E108 : error on the safety switch
- Code E109 : fault on the pressure switch
- Code E110 : NTC1 error
- Code E112 : excessive fuel temperature
- Code E115 : The general error

17. SAFETY MEASURES

The boiler is equipped with the following safety devices:

- FLUE GASES TEMPERATURE SENSOR

Checks the temperature of flue gases that allow the boiler to be turned ON or stop the ignition if the flue gas temperature drops down below the programmed value.

- BOILER CONTACT THERMOSTAT

When the temperature goes over the set safety value the stove will turn off immediately.

- WATER TEMPERATURE SENSOR (ERROR E108)

When the water temperature comes close to the stop-temperature (80 ° C) the sensor triggers the boiler to do a series of cooling cycles or turns the boiler off automatically using the ECO-STOP in order to prevent blocking of the above-described capillary temperature sensor.

- ELECTRIC SAFETY

The boiler is protected from high current disturbances using standard fuses that are located in the main switch on the back side of the boiler and on the control panel - the motherboard.

- GEAR MOTOR

When the gear motor stops working, the boiler keeps on working until the flame, due to the lack of oxygen, goes out and until the boiler reaches the minimal cooling level.

- INTERRUPTION OF ELECTRICITY

If there is a short interruption of electricity the boiler automatically starts to cool down.

- NO IGNITION

If there is no flame when you turn the boiler on the boiler goes into an alarming state.

- FLUE GAS MASS FLOW

At nominal heat output, the flue gas mass flow is 12,2 g/s, and 5,4 g/s at reduced heat output.

- FLUE GAS TEMPERATURE

Flue gas temperature at nominal heat output is 100°C and 45°C at reduced heat output.

- SHARED FLUE

It is not allowed. Boiler must have his own flue.

18. FAILURES - CAUSES – SOLUTIONS

PROBLEMS	POSSIBLE CAUSES	SOLUTIONS
Wooden granules are not put into the firebox, in the combustion chamber.	1. The wooden granules tank is empty. 2. The infinity spiral is blocked. 3. The gear motor of the infinity spiral is defective. 4. Electronic card is defective.	1. Fill the tank 2. Empty the tank and unblock the spiral - snail *3. Change the gear motor* *4. Change the electronic card*
The flame is out or the stove turns off automatically.	1. The wooden granules tank is empty. 2. The combustion chamber is not supplied with the wooden granules. 3. Safety probe intervention for the wooden granules temperature. 4. The doors are not closed properly or the glass sealing is worn out. 5. Inadequate wooden granules. 6. Poor supply of wooden granules. 7. The combustion chamber is empty. 8. The chimney is clogged. 9. Interference of failure of the pressure switch. 10. The smoke vacuum motor is defective.	1. Fill the tank with wooden granules. 2. See last instruction. 3. Let the boiler cool off completely and turn in back on again. If the problem persists call technical support. 4.Close the door or change the glass sealing with original sealing. 5. Change the type of the wooden granules and pick the type that is approved by the manufacturer. 6. Check the dosage and settings. 7.Clean the combustion chamber as instructed in the manual. 8. Clean the smoke channel. 9. Change the pressure switch. *10. Check the motor and change if needed.*
It worked for a couple of minutes but then it turned off.	1. The ignition phase is not over. 2. Check if there is an electricity interruption. 3. The smoke channel is clogged. 4. Interference of failure of the pressure switch.	1. Try igniting again. 2. See last instruction. 3. The smoke channel is clogged. *4. Check or change the probe.* *5. Check or change the spark plug.*

	5. The spark plug is damaged.	
Wooden granules are settling in the combustion chamber. **The glass on the door is dirty and the flame is weak.**	1. Lack of air for combustion. 2. Wet or inadequate wooden granules. 3. The smoke vacuum system motor is defective.	1. Clean the combustion chamber and check if all the openings are clear. Do the standard cleaning of the combustion chamber and the smoke channel. Check if air flow is clogged. Check the gaskets on the door. 2. Change the type of the wooden granules. 3. Check the motor and change if needed.
The smoke vacuum motor is defective.	1. The boiler is not receiving the electricity. 2. The motor is defective. 3. Motherboard is defective. 4. The control panel is defective.	1. Check the main power supply and resistance to melting. 2. Check the motor and condenser; change if needed. *3. Change the electronic card.* *4. Change the control panel.*
In automatic mode the stove works at maximum capacity all the time.	1. The thermostat is programmed to the maximum position. 2. The thermostat for outside air always checks the cool air. 3. The probe that checks the temperature is defective. 4. The control panel is defective or not working.	1. Set the thermostat temperature again. 2. Change the probe position. *3. Check the probe and change if needed.* *4. Check the control panel and change if needed.*
The boiler does not turn on	1. Check if there is an electricity interruption. 2. The wooden granules probe is blocked. 3. The pressure switch is not working (says it is blocked). 4. The smoke vacuum or smoke supply channel is clogged.	1. Make sure the plug is in and check if the main switch is in I position. 2. Unblock the probe by checking the thermostat in the back. If it blocks again *change the thermostat*. 3. Change the pressure switch. 4. Clean the smoke channel.

Table 8.

19. INFORMATION ON DISPOSING (THROWING AWAY) AND DISMANTLING (PULLING APART) OF THE STOVE

Dismantling and throwing away, or disposing of an old used stove is the sole responsibility of the owner.

The owner of the boiler must abide by the regulations in his/her country related to the safety and environment protection. Dismantling and disposing of the boiler may be left to a third party to do if the third party is a company authorized to collect and dispose of such materials.

NOTICE: *In all cases you must abide by the applicable regulations of the country where the stove is installed regarding disposal of such materials (things) and, if necessary, report the disposal of such items.*

ATTENTION

Dismantling the boiler must be done only when the chamber of the boiler is not working and when the boiler is unplugged from power (no power supply).

- *pull out all electric parts,*
- *throw away the batteries and electronic cards of the remote control in the proper garbage cans in accordance with the standards.*
- *separate the batteries you are keeping from the electric cards,*
- *dismantle the stove with the help from an authorized company*

ATTENTION

Disposing of the boiler in public places poses a serious risk for people and animals. In such cases it is always the responsibility of the owner if a person or an animal gets hurt.

When the boiler is dismantled, this manual and all other documents related to the boiler must be destroyed.

20. THE DURATION OF GUARANTEED SERVICE

By this we mean the time in which we guarantee service, accessories, and spare parts, starting from the date of purchase of the appliances.

The time of the guaranteed service is in accordance with the legislation.

In case of a change of the model and design of the appliance, the deadline for replacing the parts for which the design has been changed is within the legal deadline.

After this period the affected parts are provided in the new designs.

20.1. WARRANTY TERMS AND CONDITIONS

Product warranty is valid within the legally defined deadline.

The warranty does not apply to the glass or to the physical damage caused after purchase.

THE MANUFACTURER RESERVES ALL RIGHTS TO CHANGES.

The appliance will, within the warranty period, only function correctly when used in accordance with the instructions for connection and use.

The warranty ceases to be valid if it is determined that:

- Connecting the product or repair was performed by unauthorized persons, or if they built in counterfeit parts,

- If the appliance is not properly used in accordance with this instructions manual,

- If during use there was mechanical damage to the appliance,

- If the fault repair was done by unauthorized persons,

- If the appliance was used for commercial purposes,

- If the damage occurred during transportation after selling the appliance,

- If the failure was due to improper installation, improper maintenance, or mechanical damage caused by the customer,

- If the malfunction was due to too much or too low voltage as well as due to force majeure.

Malfunctions of the appliance can be removed outside the warranty period with original spare parts that we also give a warranty for under the same terms and conditions.

This warranty does not exclude or affect the rights of consumers in connection with the goods in accordance with legal provisions. If the delivered product does not match the contract, the consumer has the right to require the seller to fix this by repairing or replacing the product in accordance with legislation that is in effect.

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WE RESERVE THE RIGHT TO CHANGE THE PRODUCT
THAT DOES NOT VIOLATE THE DEVICE'S FUNCTIONALITY